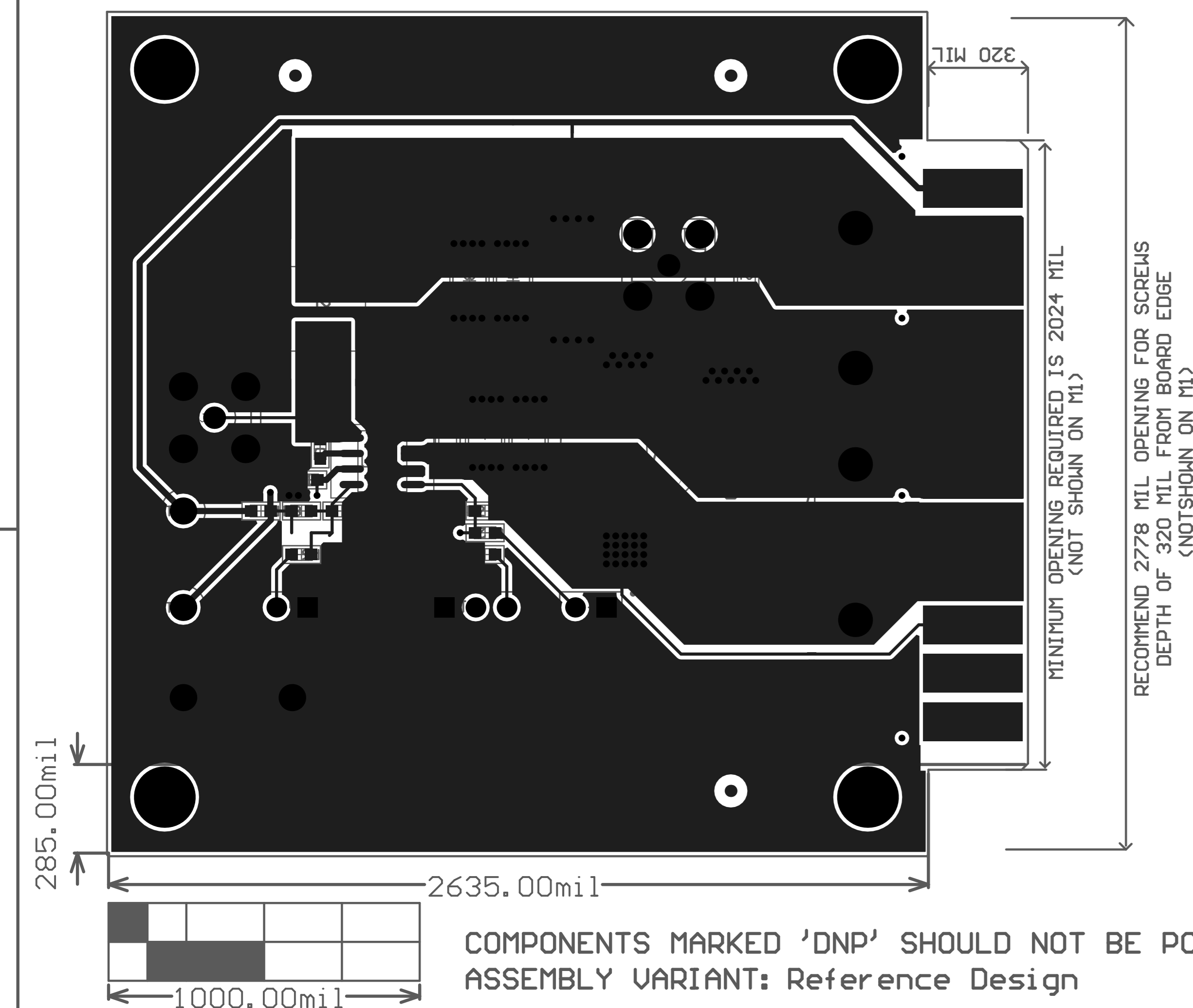


The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
 Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
 Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
 Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

PROJECT TITLE: .PRJ_Title	
DESIGNED FOR: .PRJ_Customer	
FILE NAME: PMP15016_Flying Shark.PcbDoc	
ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368

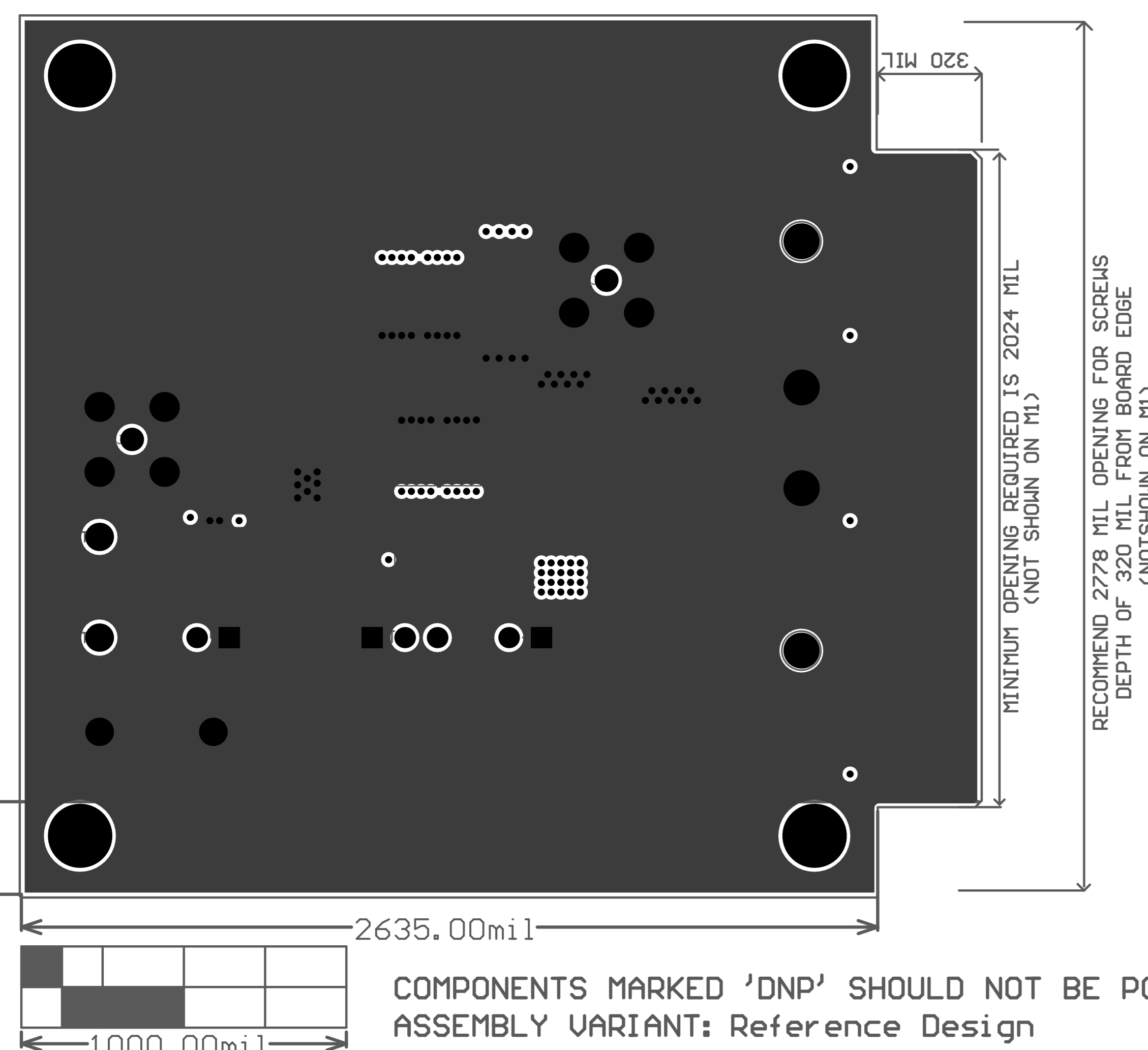
PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV:	Not In VersionControl
LAYER NAME =						
PLOT NAME =	GENERATED	: 6/28/2016	3:12:59 PM	TEXAS INSTRUMENTS		

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS:	<input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____
TOLERANCE:	<input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2 <input type="checkbox"/> OTHER +/- _____
BOW & TWIST:	<input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2 <input type="checkbox"/> OTHER +/- _____
DRILLING:	
REFERENCE:	<input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES
PTH MIN COPPER THICKNESS:	<input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____
BOARD FINISH:	
SILKSCREEN:	<input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM
SILKSCREEN COLOR:	<input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____
SOLDER RESIST COLOR:	<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____
SURFACE FINISH:	<input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG <input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____
ARRAY/PANEL:	<input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1 <input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION:	<input type="checkbox"/> YES
BARE BOARD ELEC. TEST:	<input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER
MANUFACTURER'S UL:	<input type="checkbox"/> RAIL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK



PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV:	Not In VersionControl
LAYER NAME =						
PLOT NAME =	GENERATED	: 6/28/2016	3:13:02 PM	TEXAS INSTRUMENTS		

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

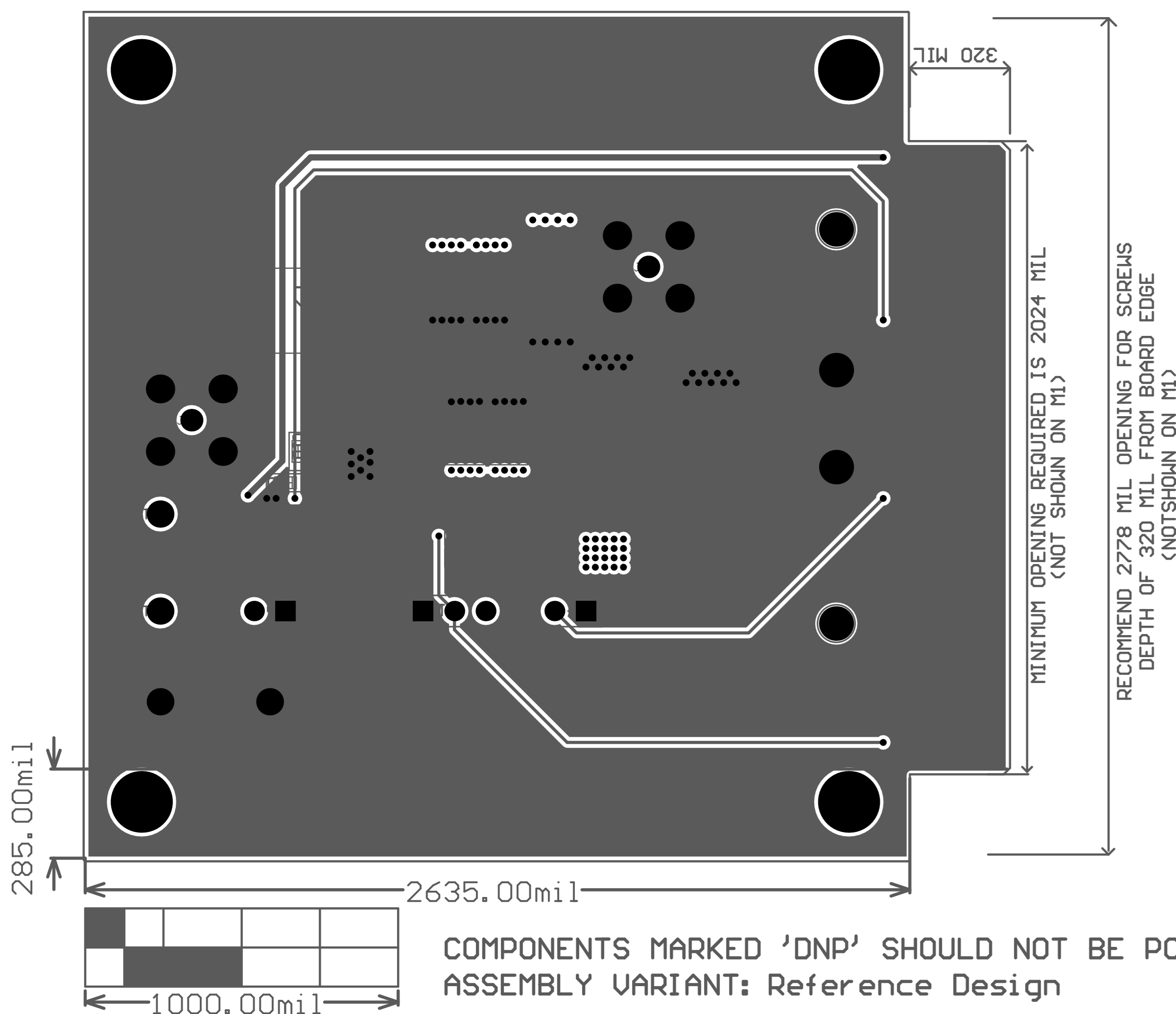
ENGINEER:	.PRJ_Engineer	LAYOUT BY:	.PCB_Layout
SCALE:	1.00	ALTIUM DESIGNER VERSION:	16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS:	<input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____
TOLERANCE:	<input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2 <input type="checkbox"/> OTHER +/- _____
BOW & TWIST:	<input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2 <input type="checkbox"/> OTHER +/- _____
DRILLING:	
REFERENCE:	<input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES
PTH MIN COPPER THICKNESS:	<input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____
BOARD FINISH:	
SILKSCREEN:	<input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM
SILKSCREEN COLOR:	<input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____
SOLDER RESIST COLOR:	<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____
SURFACE FINISH:	<input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG <input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____
ARRAY/PANEL:	<input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1 <input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION:	<input type="checkbox"/> YES
BARE BOARD ELEC. TEST:	<input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER
MANUFACTURER'S UL:	<input type="checkbox"/> RAIL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV: Not In VersionControl
LAYER NAME =					
PLOT NAME =	GENERATED	: 6/28/2016	3:13:05 PM	TEXAS INSTRUMENTS	

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

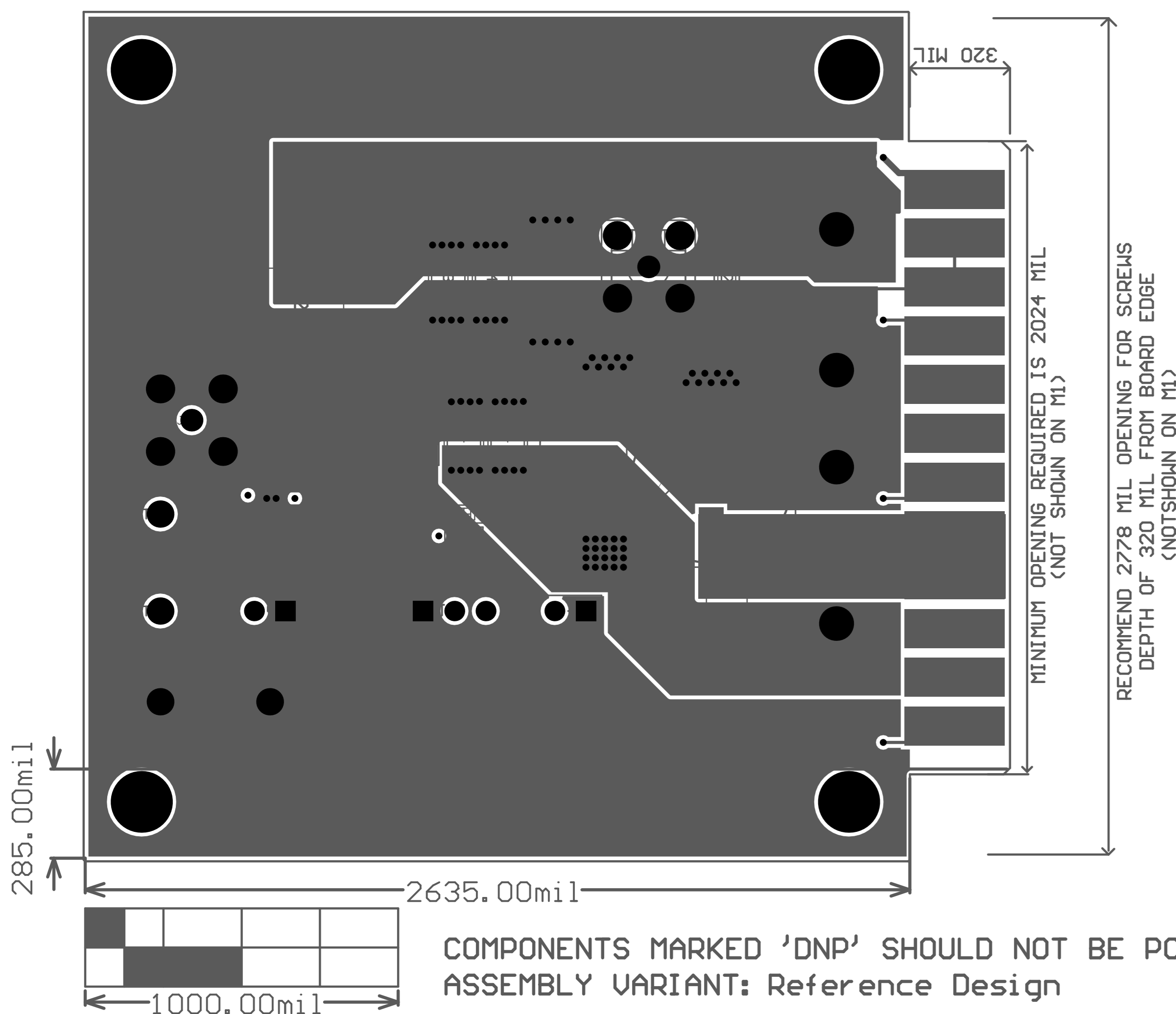
ENGINEER:	LAYOUT BY:
.PRJ_Engineer	.PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION:
	16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

PROJECT TITLE: .PRJ_Title	
DESIGNED FOR: .PRJ_Customer	
FILE NAME: PMP15016_Flying Shark.PcbDoc	
ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368

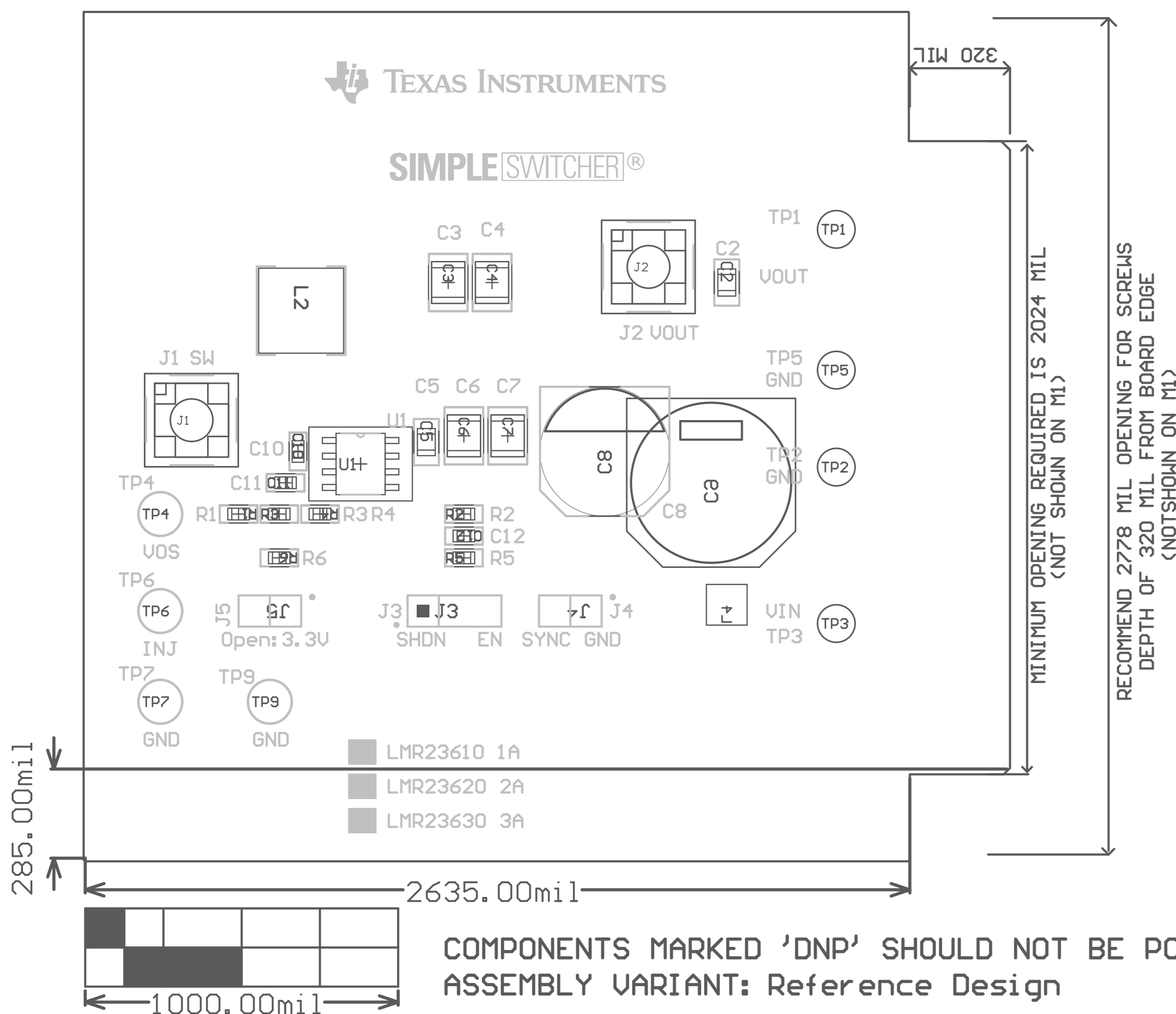
PCB VIEWED FROM TOP SIDE	BOARD #: .PRJ_Number	REV: .PCB_Rev	SUN REV: Not In VersionControl	
LAYER NAME =				
PLOT NAME =	GENERATED : 6/28/2016	3:13:09 PM	TEXAS INSTRUMENTS	

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAIL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV:	Not In VersionControl
LAYER NAME =						
PLOT NAME =	GENERATED	: 6/28/2016	3:13:13 PM	TEXAS INSTRUMENTS		

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

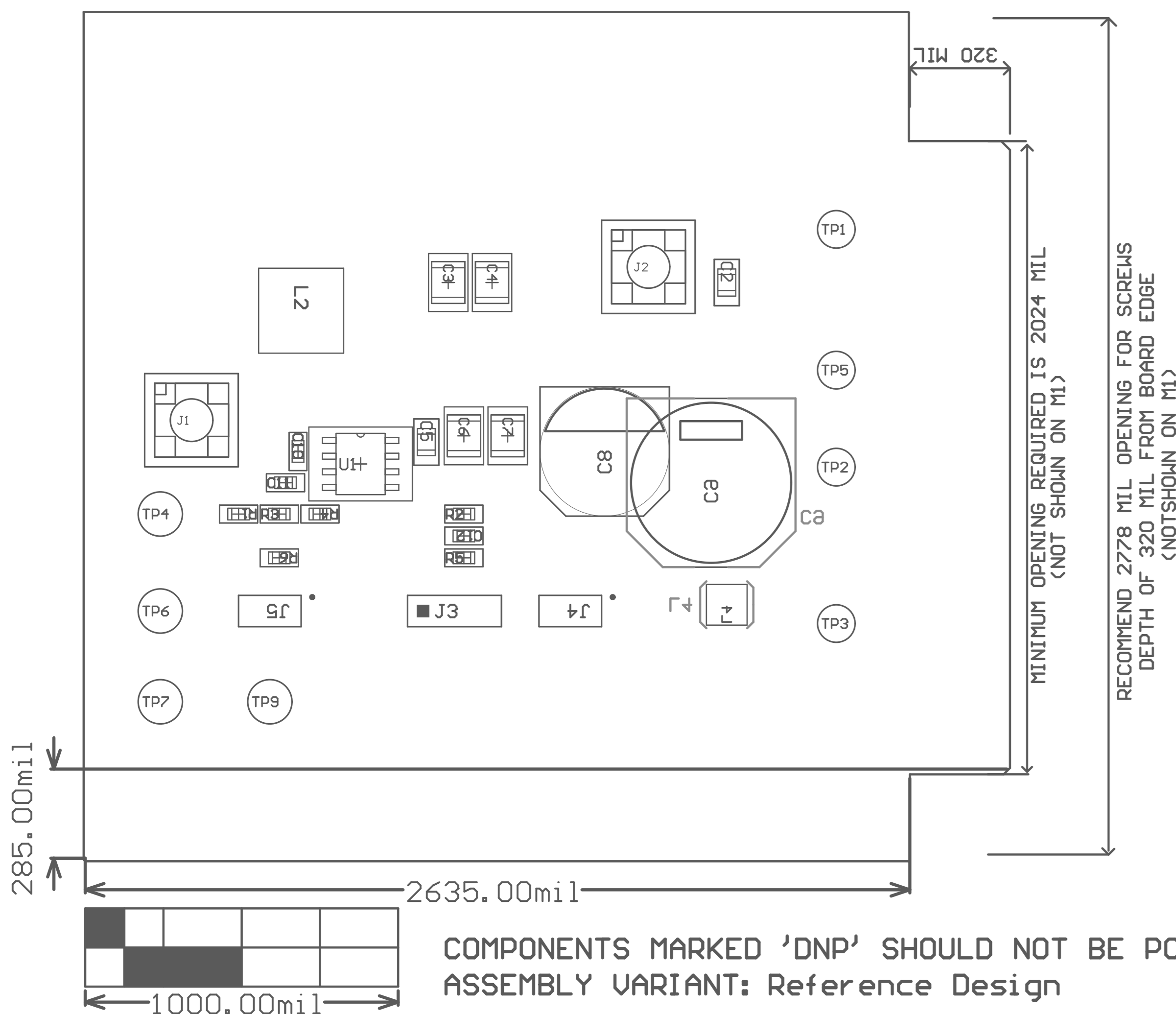
PROJECT TITLE: .PRJ_Title	
DESIGNED FOR: .PRJ_Customer	
FILE NAME: PMP15016_Flying Shark.PcbDoc	
ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV:	Not In VersionControl
LAYER NAME =						
PLOT NAME =	GENERATED	: 6/28/2016	3:13:16 PM	TEXAS INSTRUMENTS		

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

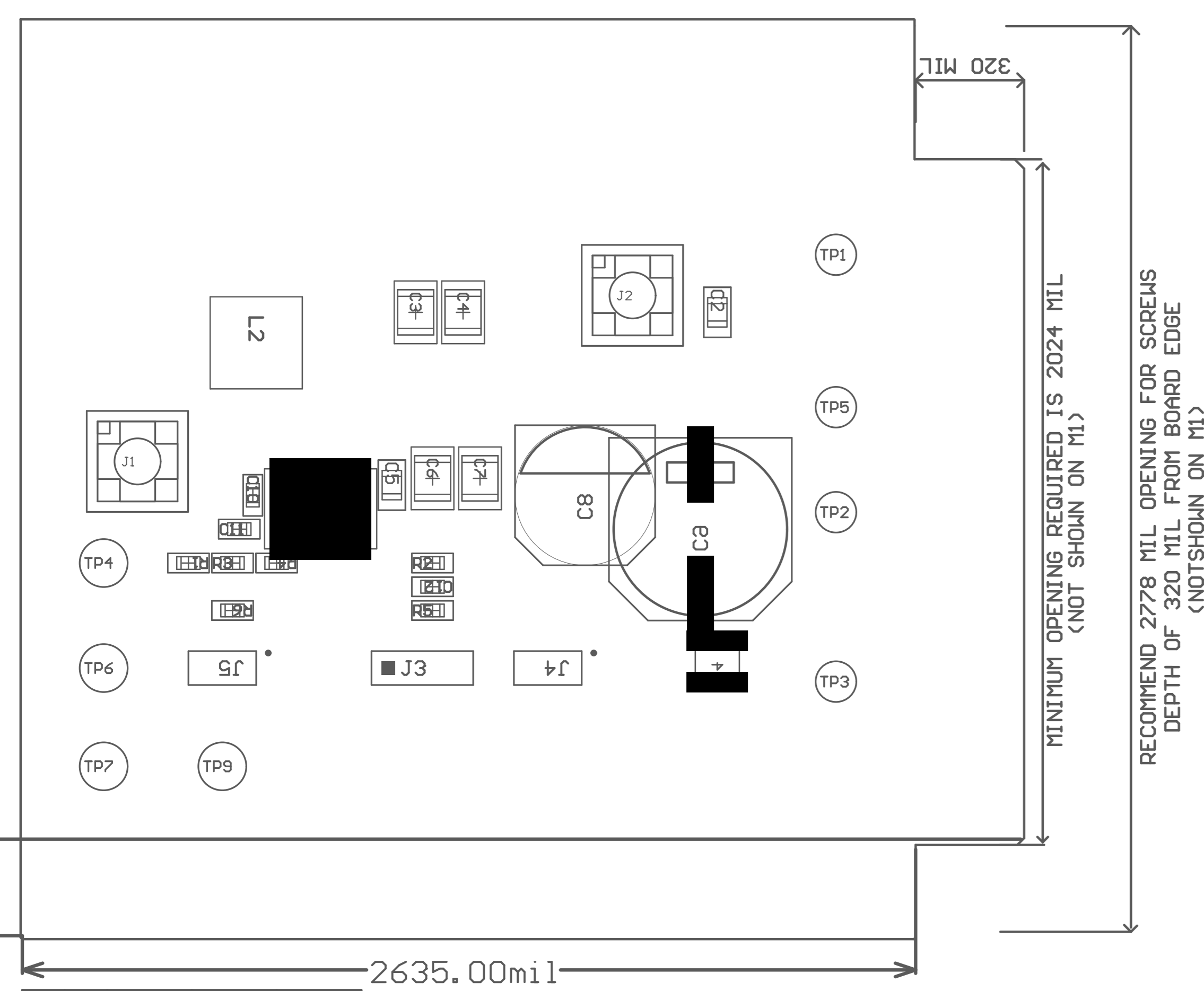
PROJECT TITLE: .PRJ_Title	
DESIGNED FOR: .PRJ_Customer	
FILE NAME: PMP15016_Flying Shark.PcbDoc	
ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS --> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV: Not In VersionControl
LAYER NAME =					
PLOT NAME =	GENERATED	: 6/28/2016	3:13:19 PM	TEXAS INSTRUMENTS	

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

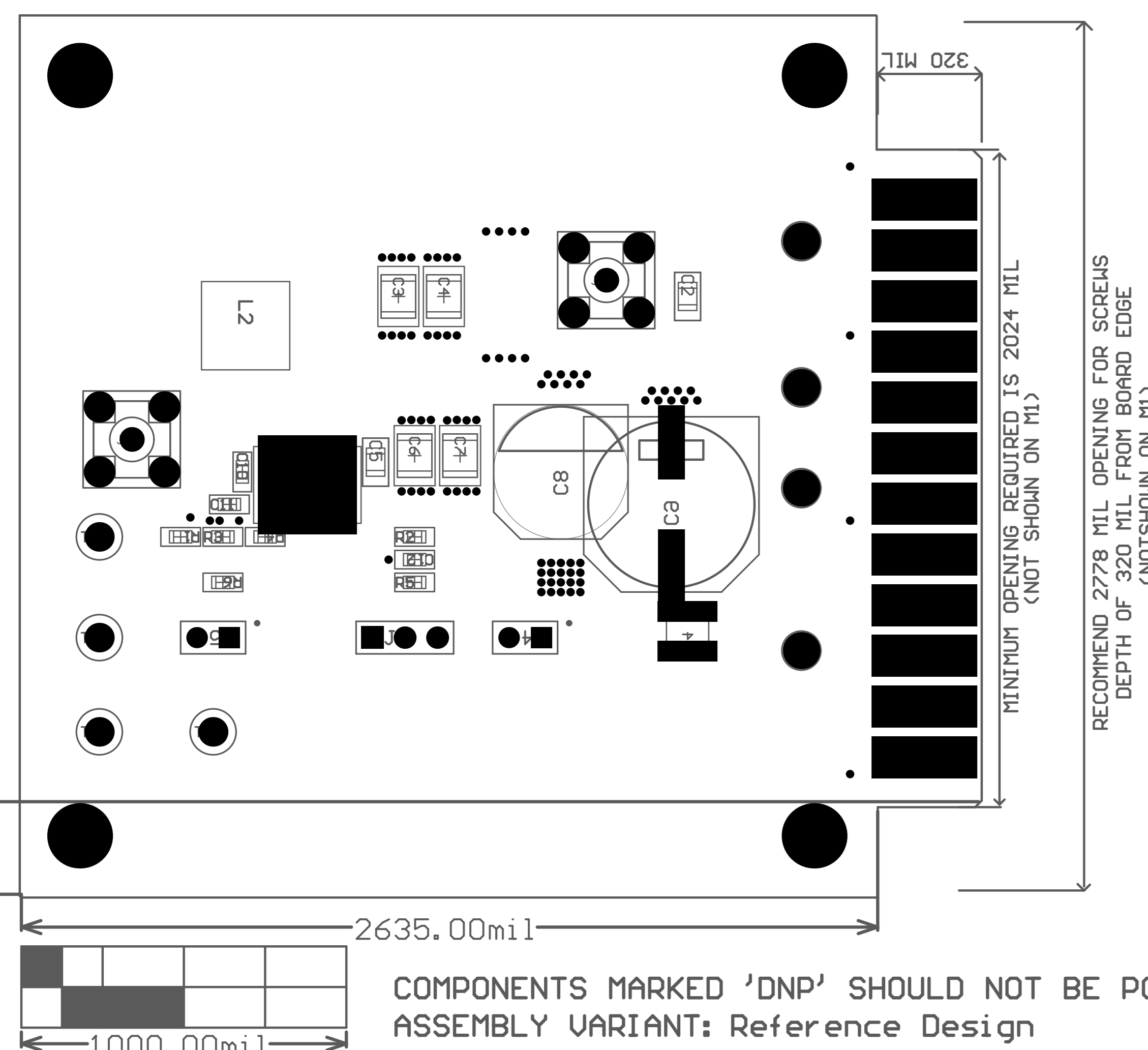
ENGINEER:	LAYOUT BY:
.PRJ_Engineer	.PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION:
	16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS --> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



PCB VIEWED FROM TOP SIDE	BOARD #: .PRJ_Number	REV: .PCB_Rev	SUN REV: Not In VersionControl
LAYER NAME =			
PLOT NAME =	GENERATED : 6/28/2016	3:13:22 PM	TEXAS INSTRUMENTS

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

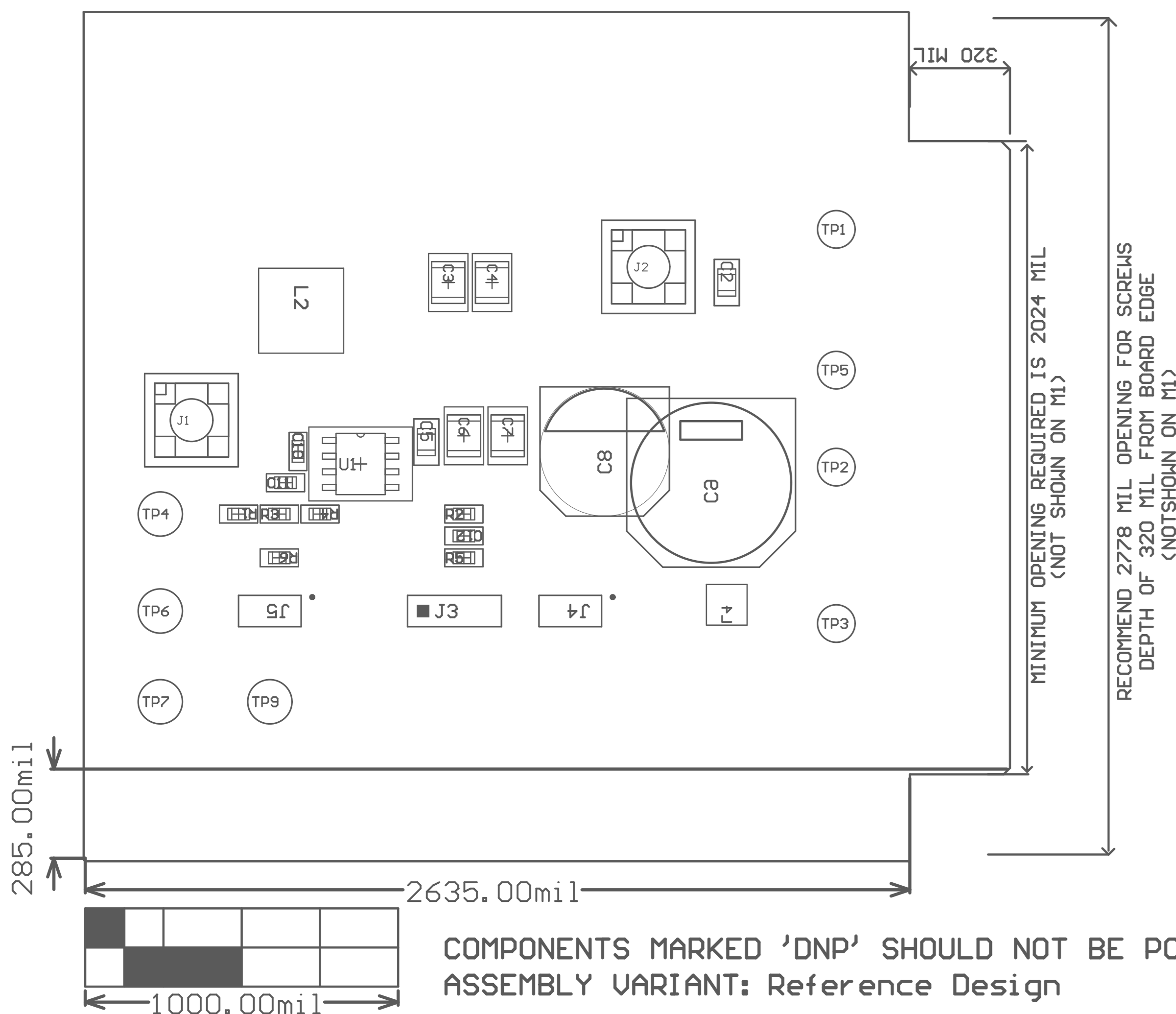
ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV:	Not In VersionControl
LAYER NAME =						
PLOT NAME =	GENERATED	: 6/28/2016	3:13:25 PM	TEXAS INSTRUMENTS		

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

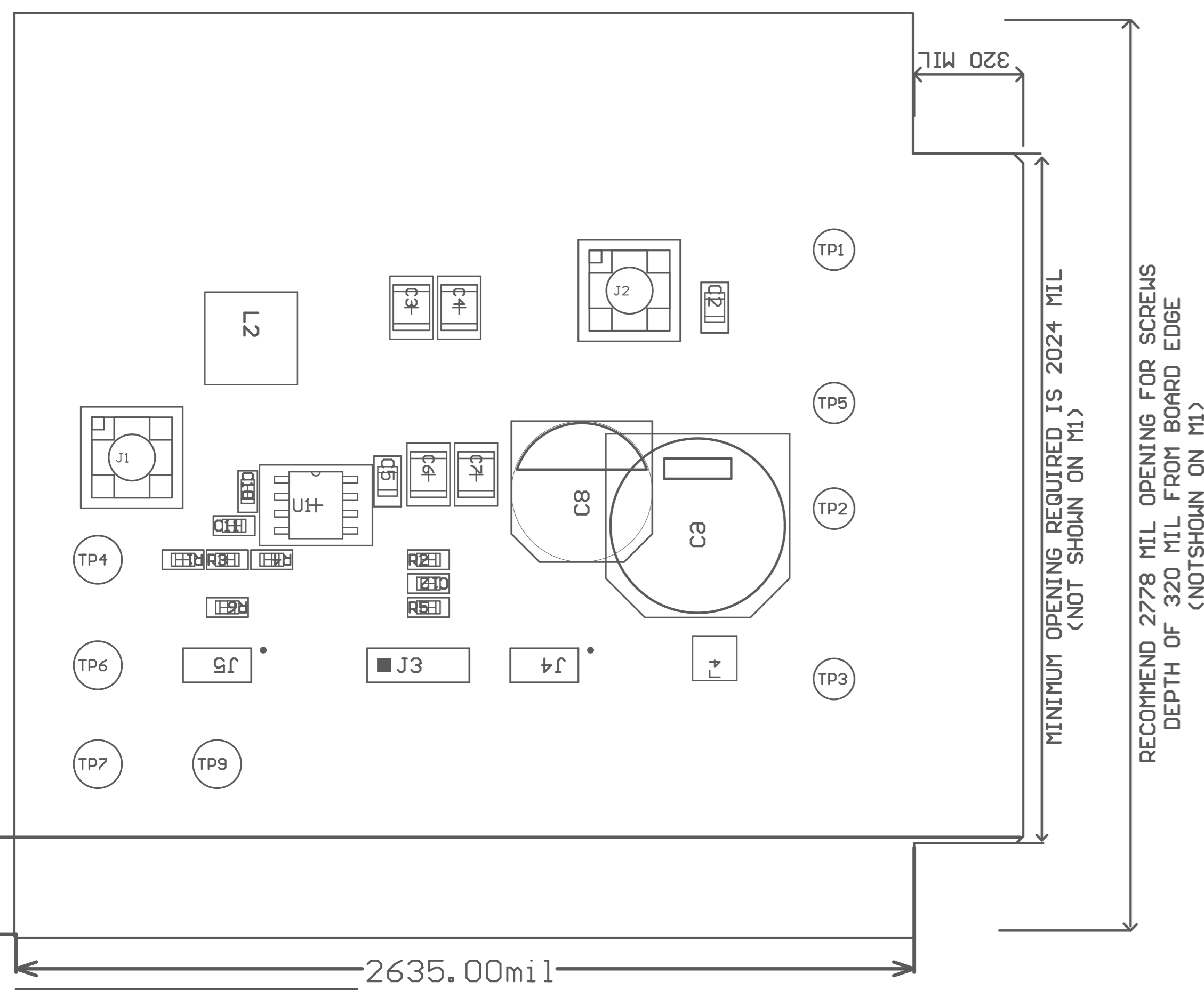
PROJECT TITLE: .PRJ_Title	
DESIGNED FOR: .PRJ_Customer	
FILE NAME: PMP15016_Flying Shark.PcbDoc	
ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV:	Not In VersionControl
LAYER NAME =						
PLOT NAME =	GENERATED	: 6/28/2016	3:13:28 PM	TEXAS INSTRUMENTS		

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

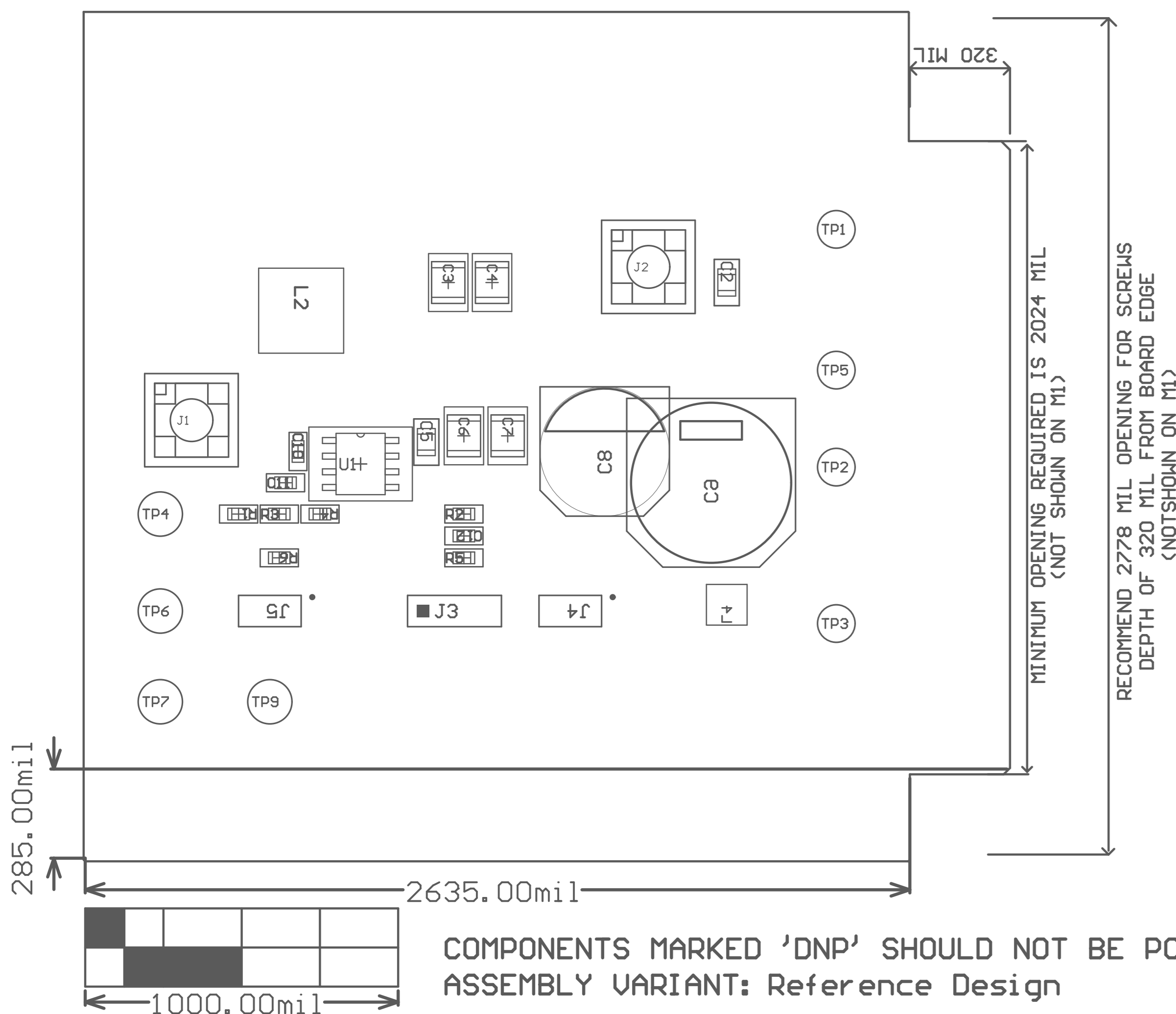
ENGINEER:	.PRJ_Engineer	LAYOUT BY:	.PCB_Layout
SCALE:	1.00	ALTIUM DESIGNER VERSION:	16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

PCB VIEWED FROM TOP SIDE	BOARD #: .PRJ_Number	REV: .PCB_Rev	SUN REV: Not In VersionControl	Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.
LAYER NAME =				
PLOT NAME =	GENERATED : 6/28/2016	3:13:31 PM	TEXAS INSTRUMENTS	ENGINEER: .PRJ_Engineer
				LAYOUT BY: .PCB_Layout
				SCALE: 1.00
				ALTIUM DESIGNER VERSION: 16.0.9.368



PROJECT TITLE: .PRJ_Title

DESIGNED FOR: .PRJ_Customer

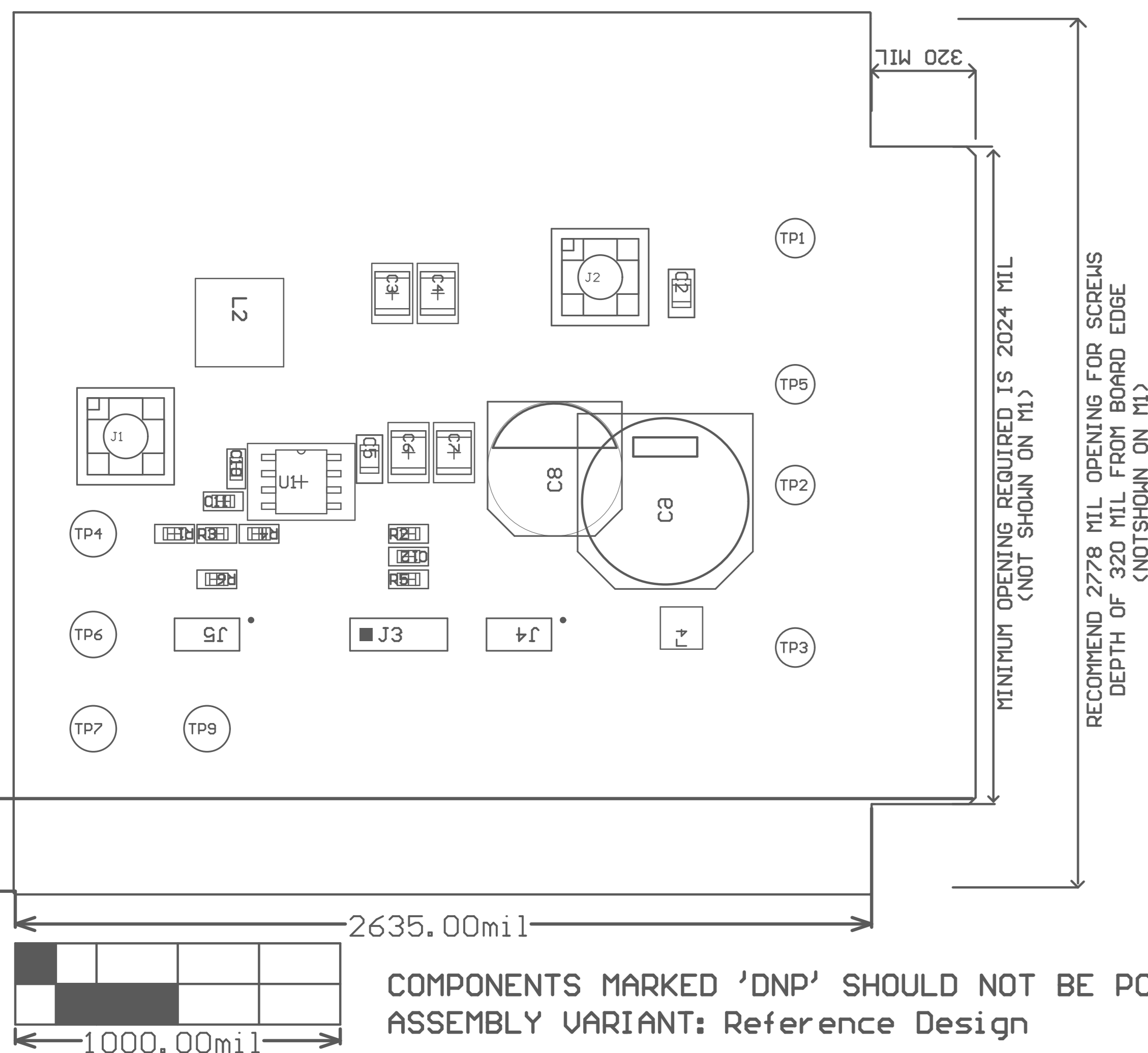
FILE NAME: PMP15016_Flying Shark.PcbDoc

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS:	<input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____
TOLERANCE:	<input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2 <input type="checkbox"/> OTHER +/- _____
BOW & TWIST:	<input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2 <input type="checkbox"/> OTHER +/- _____
DRILLING:	
REFERENCE:	<input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES
PTH MIN COPPER THICKNESS:	<input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____
BOARD FINISH:	
SILKSCREEN:	<input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM
SILKSCREEN COLOR:	<input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____
SOLDER RESIST COLOR:	<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____
SURFACE FINISH:	<input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG <input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____
ARRAY/PANEL:	<input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1 <input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION:	<input type="checkbox"/> YES
BARE BOARD ELEC. TEST:	<input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER
MANUFACTURER'S UL:	<input type="checkbox"/> RAIL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

PCB VIEWED FROM TOP SIDE	BOARD #: .PRJ_Number	REV: .PCB_Rev	SUN REV: Not In VersionControl	Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.	ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
LAYER NAME =					SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368
PLOT NAME =	GENERATED : 6/28/2016	3:13:34 PM	TEXAS INSTRUMENTS			



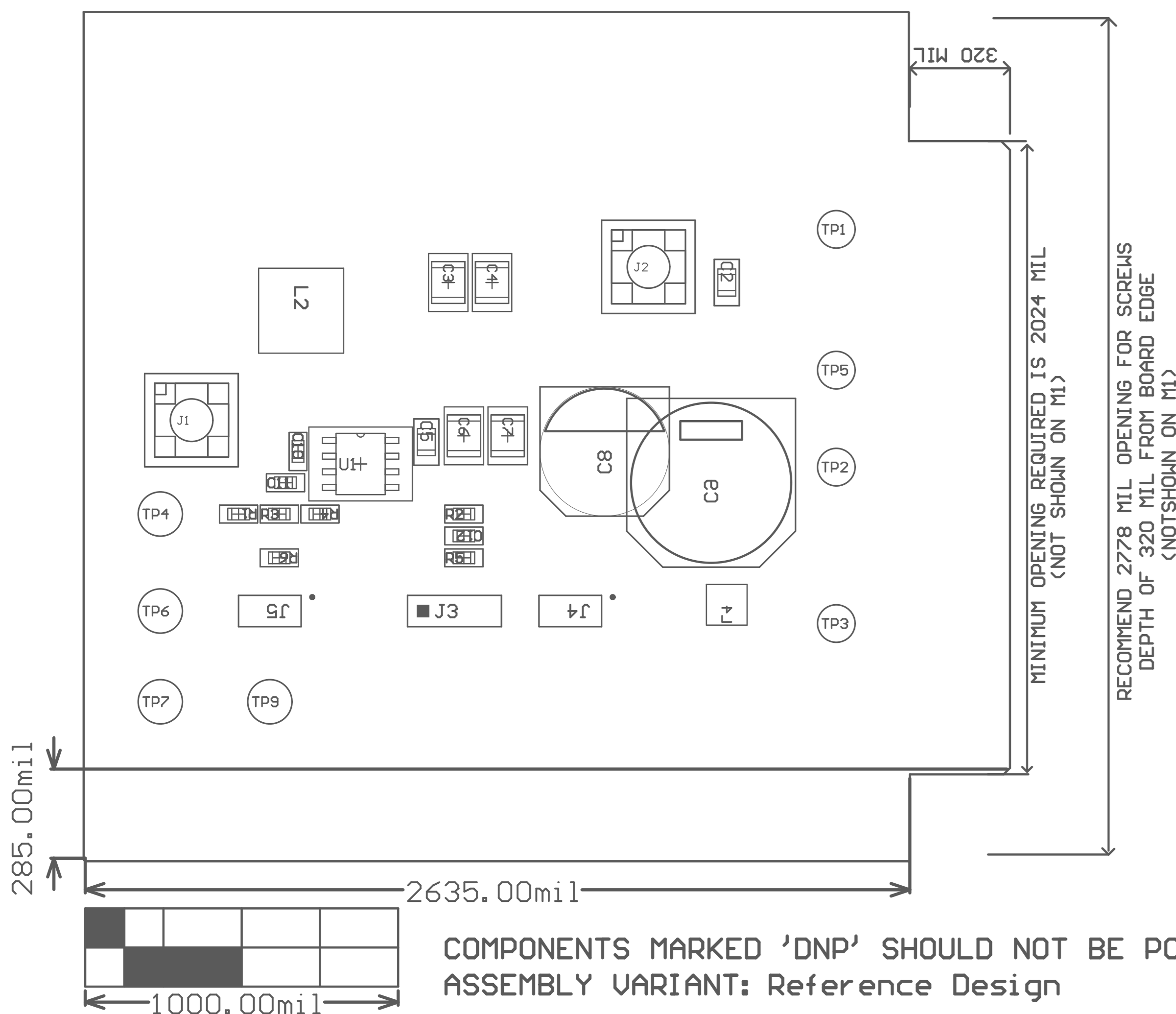
PROJECT TITLE:	.PRJ_Title
DESIGNED FOR:	.PRJ_Customer
FILE NAME:	PMP15016_Flying Shark.PcbDoc

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS --> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV:	Not In VersionControl
LAYER NAME =						
PLOT NAME =	GENERATED	: 6/28/2016	3:13:38 PM	TEXAS INSTRUMENTS		

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

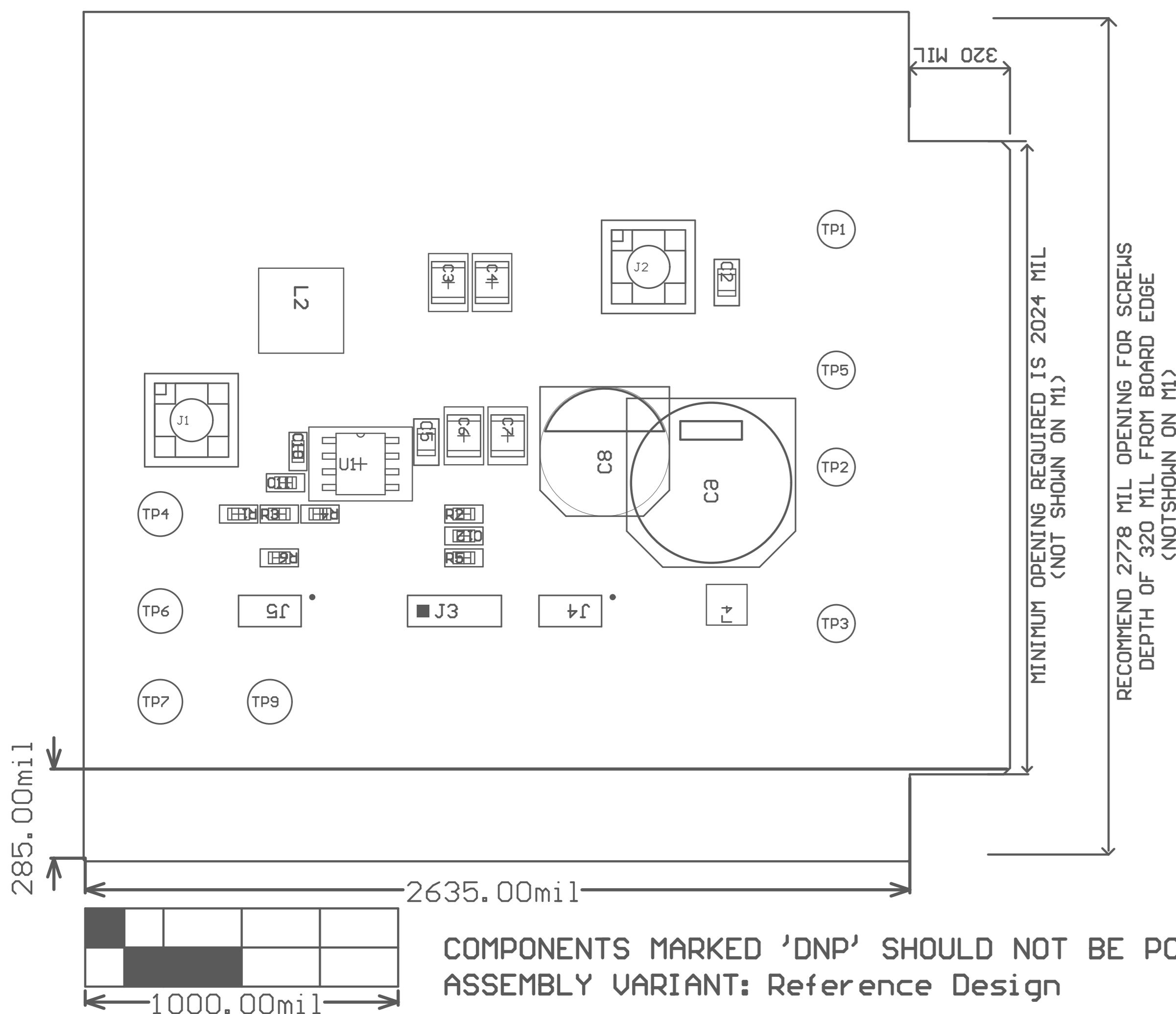
PROJECT TITLE: .PRJ_Title	
DESIGNED FOR: .PRJ_Customer	
FILE NAME: PMP15016_Flying Shark.PcbDoc	
ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAIL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

PCB VIEWED FROM TOP SIDE	BOARD #: .PRJ_Number	REV: .PCB_Rev	SUN REV: Not In VersionControl	Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.	ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
LAYER NAME =					SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368
PLOT NAME =	GENERATED : 6/28/2016	3:13:41 PM	TEXAS INSTRUMENTS			



PROJECT TITLE: .PRJ_Title

DESIGNED FOR: .PRJ_Customer

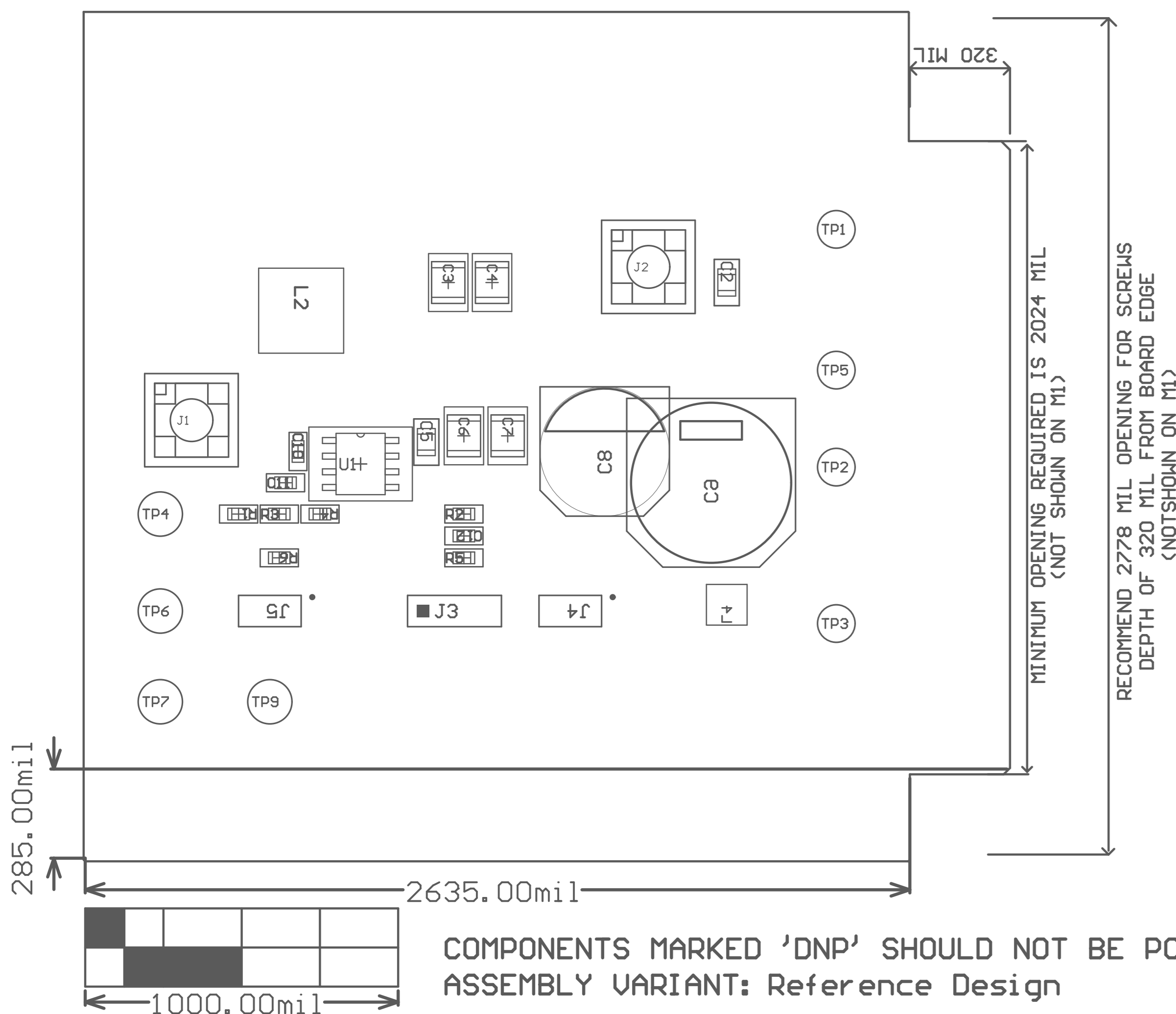
FILE NAME: PMP15016_Flying Shark.PcbDoc

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV:	Not In VersionControl
LAYER NAME =						
PLOT NAME =	GENERATED	: 6/28/2016	3:13:44 PM	TEXAS INSTRUMENTS		

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

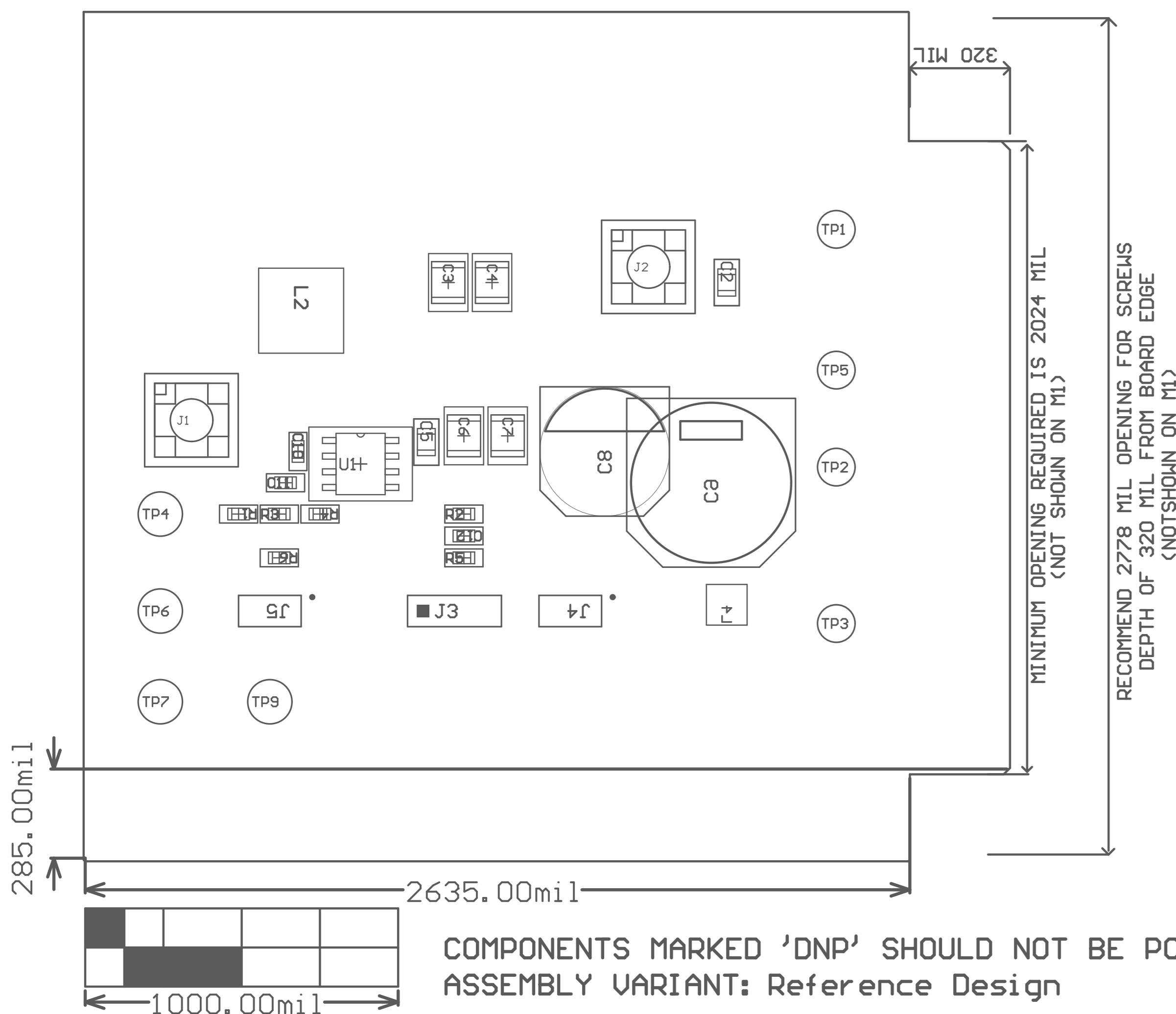
PROJECT TITLE: .PRJ_Title	
DESIGNED FOR: .PRJ_Customer	
FILE NAME: PMP15016_Flying Shark.PcbDoc	
ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS --> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV:	Not In VersionControl
LAYER NAME =						
PLOT NAME =	GENERATED	: 6/28/2016	3:13:48 PM	TEXAS INSTRUMENTS		

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

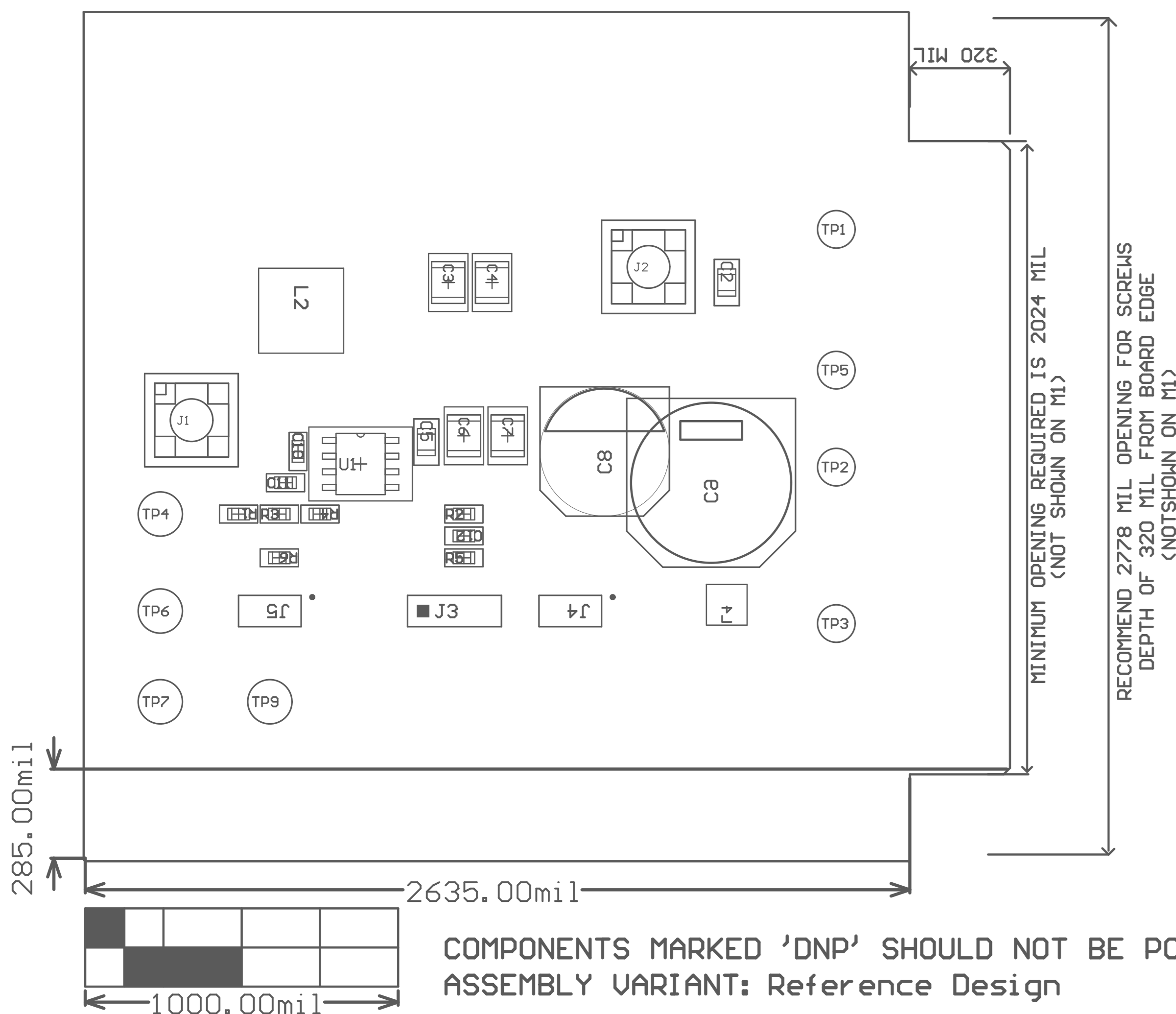
PROJECT TITLE: .PRJ_Title	
DESIGNED FOR: .PRJ_Customer	
FILE NAME: PMP15016_Flying Shark.PcbDoc	
ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



PCB VIEWED FROM TOP SIDE		BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV:	Not In VersionControl	Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.
LAYER NAME =								
PLOT NAME =		GENERATED	: 6/28/2016	3:13:52 PM	TEXAS INSTRUMENTS			

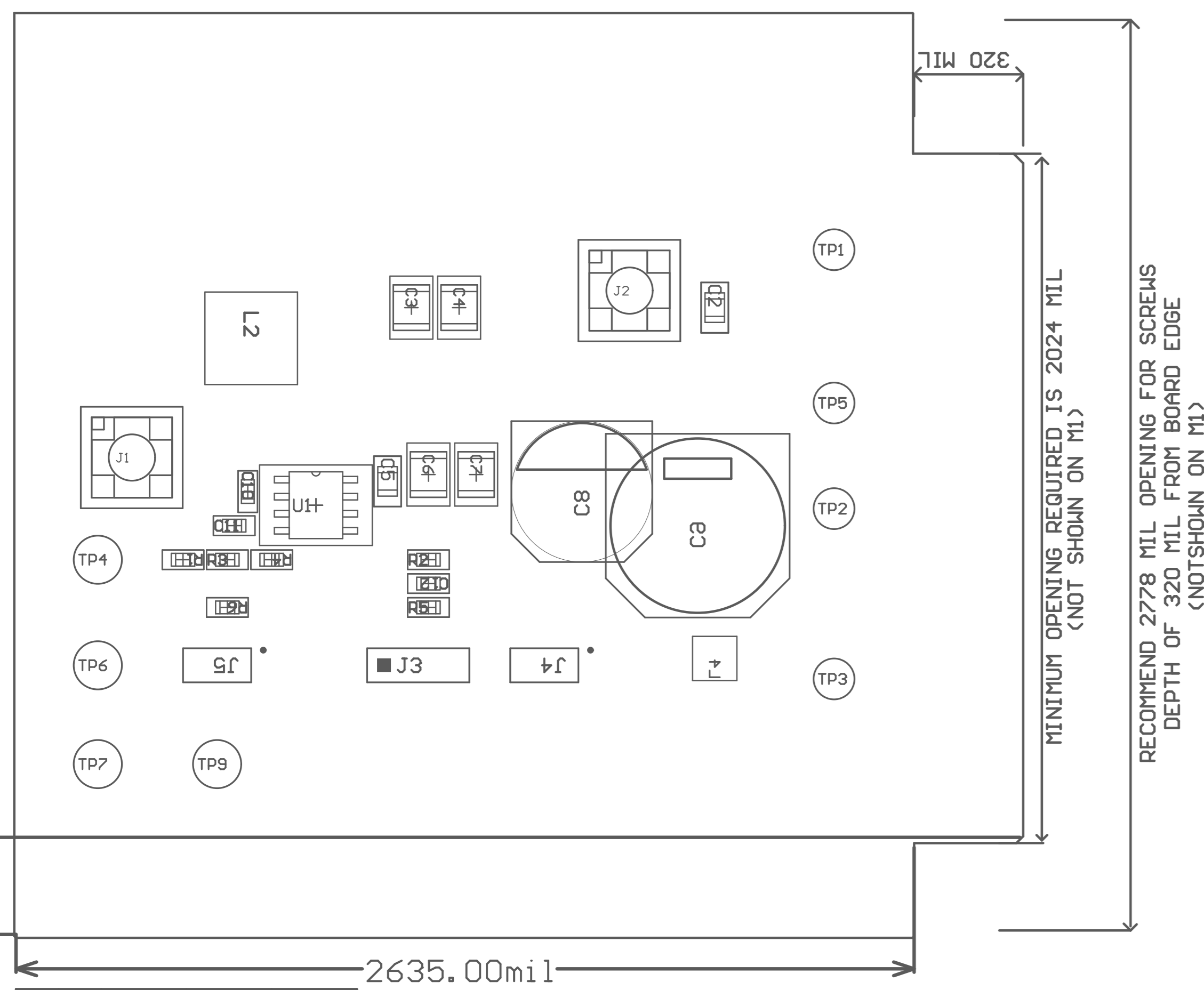
PROJECT TITLE: .PRJ_Title	
DESIGNED FOR: .PRJ_Customer	
FILE NAME: PMP15016_Flying Shark.PcbDoc	
ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

PROJECT TITLE: .PRJ_Title	
DESIGNED FOR: .PRJ_Customer	
FILE NAME: PMP15016_Flying Shark.PcbDoc	
ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368

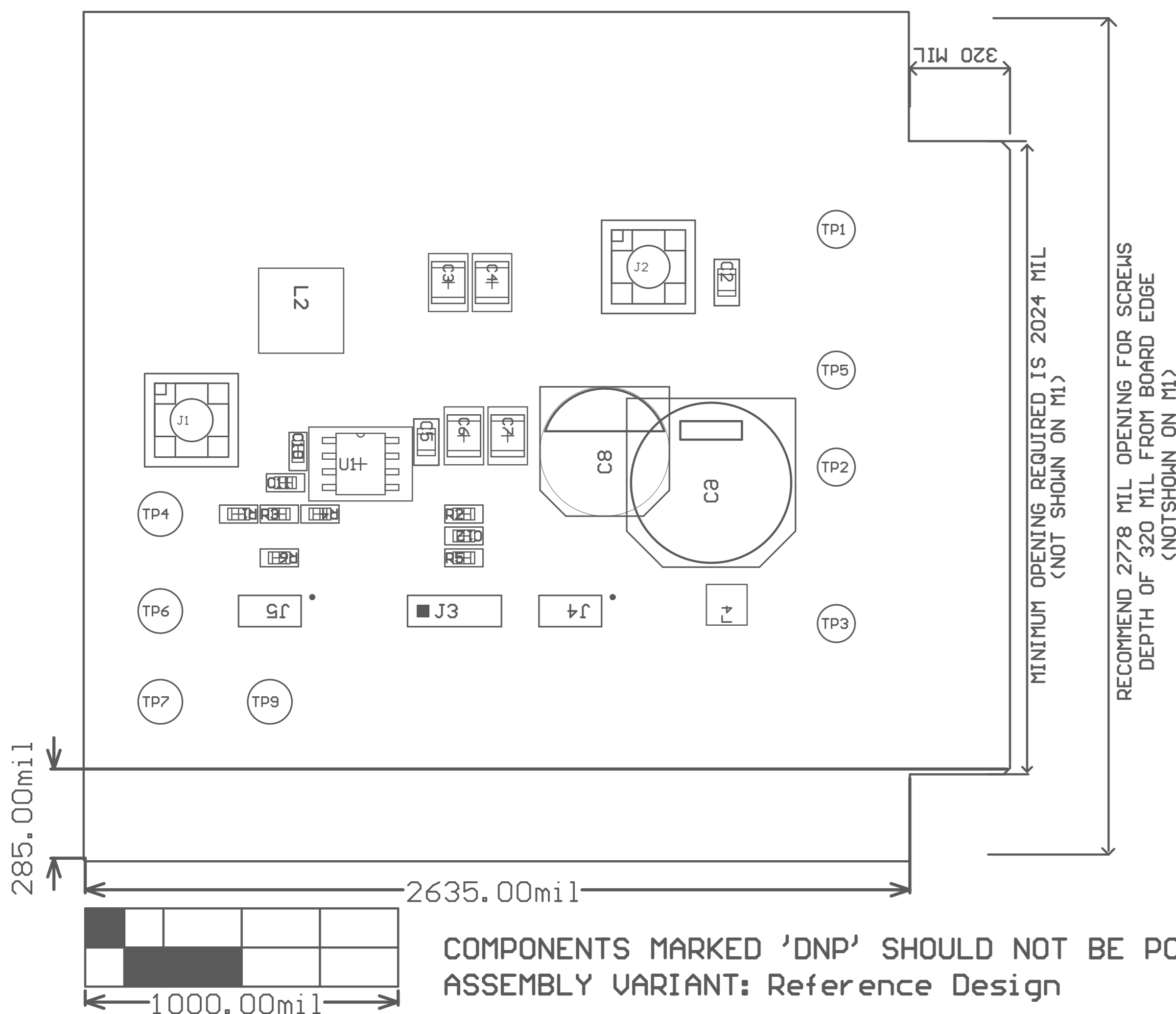
PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV:	Not In VersionControl
LAYER NAME =						
PLOT NAME =	GENERATED	: 6/28/2016	3:13:55 PM	TEXAS INSTRUMENTS		

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV: Not In VersionControl
LAYER NAME =					
PLOT NAME =	GENERATED	: 6/28/2016	3:13:58 PM	TEXAS INSTRUMENTS	

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

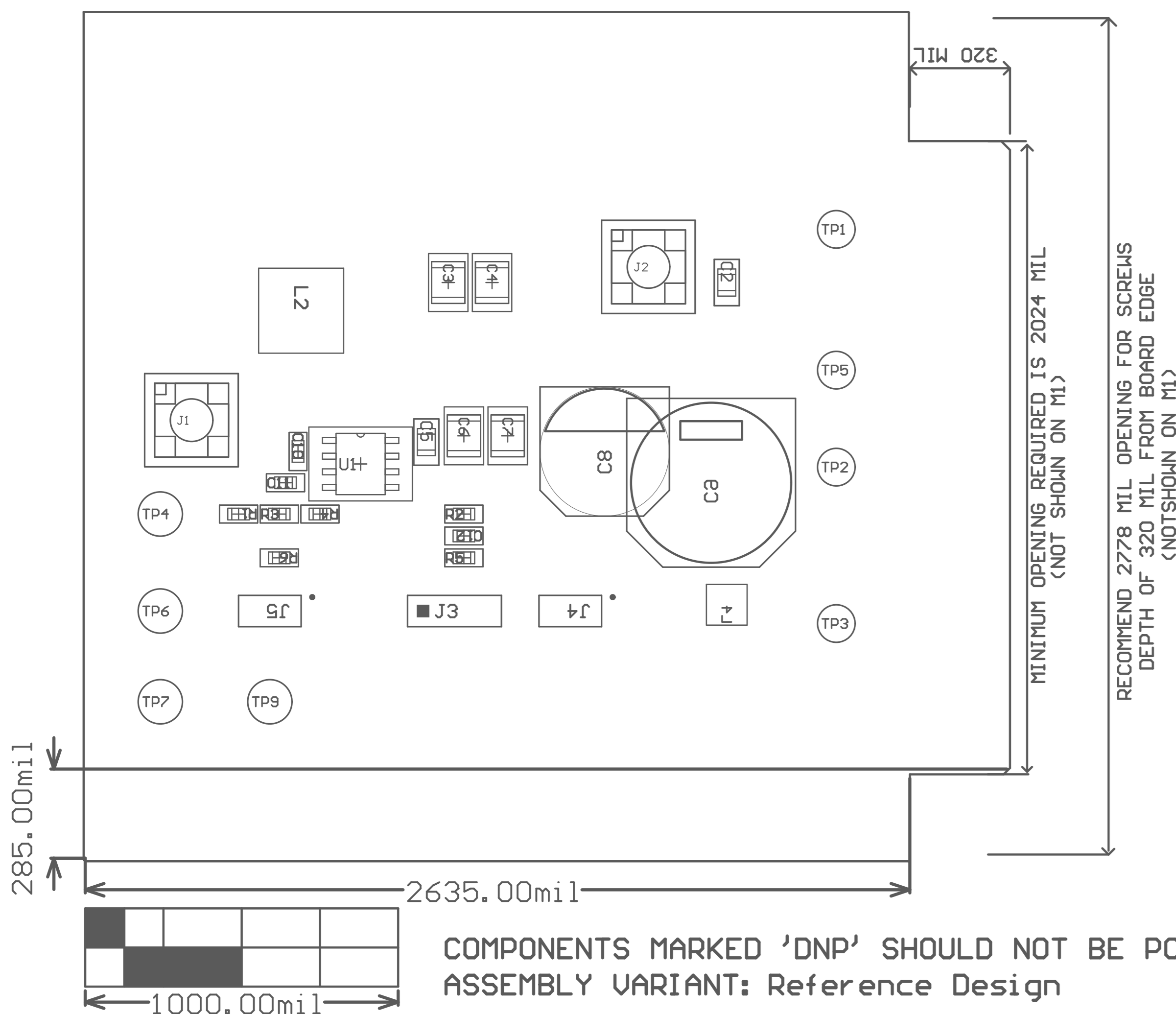
PROJECT TITLE: .PRJ_Title	
DESIGNED FOR: .PRJ_Customer	
FILE NAME: PMP15016_Flying Shark.PcbDoc	
ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS:	<input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____
TOLERANCE:	<input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2 <input type="checkbox"/> OTHER +/- _____
BOW & TWIST:	<input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2 <input type="checkbox"/> OTHER +/- _____
DRILLING:	
REFERENCE:	<input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES
PTH MIN COPPER THICKNESS:	<input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____
BOARD FINISH:	
SILKSCREEN:	<input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM
SILKSCREEN COLOR:	<input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____
SOLDER RESIST COLOR:	<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____
SURFACE FINISH:	<input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG <input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____
ARRAY/PANEL:	<input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1 <input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION:	<input type="checkbox"/> YES
BARE BOARD ELEC. TEST:	<input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER
MANUFACTURER'S UL:	<input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV:	Not In VersionControl
LAYER NAME =						
PLOT NAME =	GENERATED	: 6/28/2016	3:14:01 PM	TEXAS INSTRUMENTS		

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

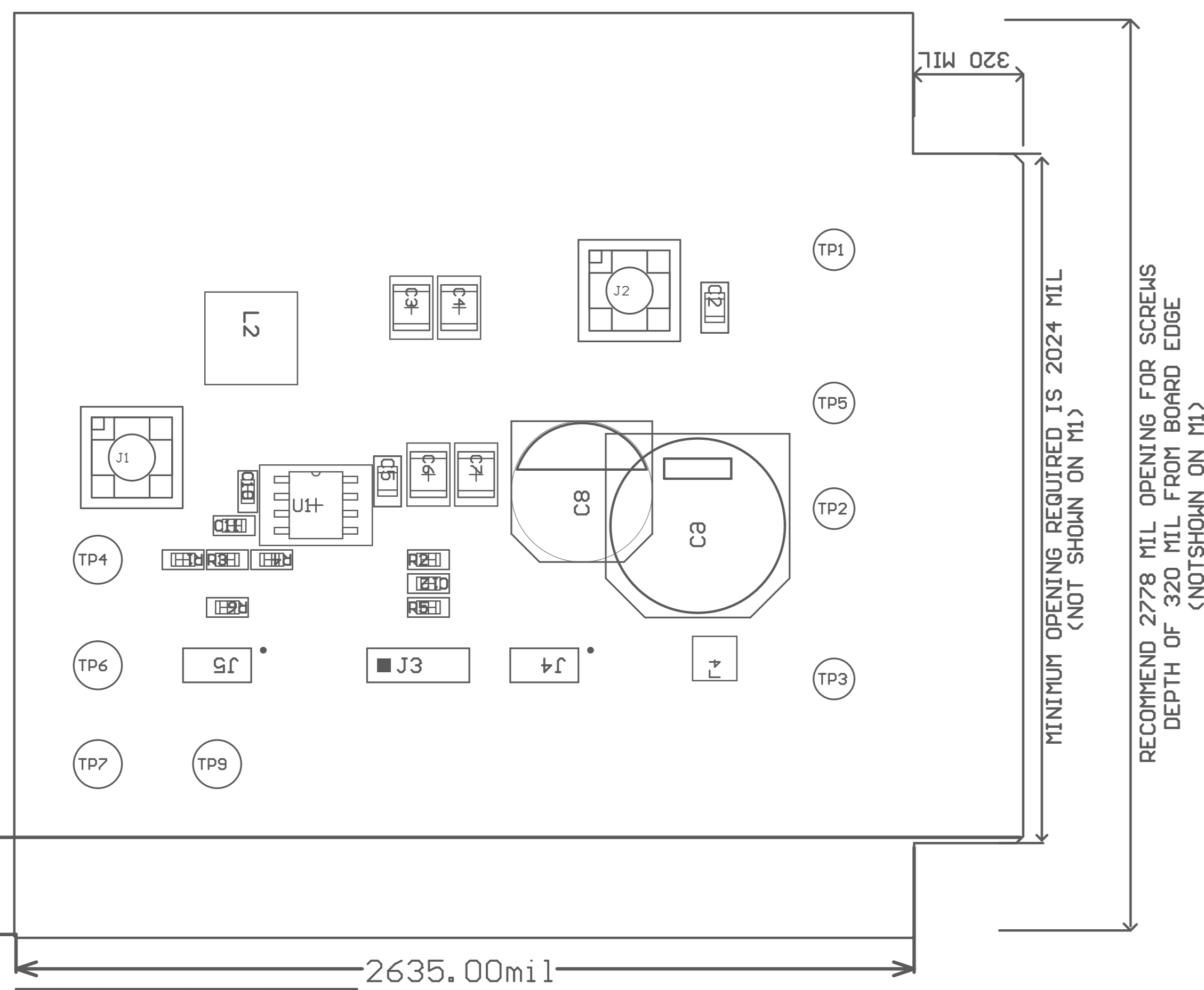
PROJECT TITLE: .PRJ_Title	
DESIGNED FOR: .PRJ_Customer	
FILE NAME: PMP15016_Flying Shark.PcbDoc	
ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS --> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV:	Not In VersionControl
LAYER NAME =						
PLOT NAME =	GENERATED	: 6/28/2016	3:14:04 PM	TEXAS INSTRUMENTS		

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

ENGINEER:	.PRJ_Engineer	LAYOUT BY:	.PCB_Layout
SCALE:	1.00	ALTIUM DESIGNER VERSION:	16.0.9.368



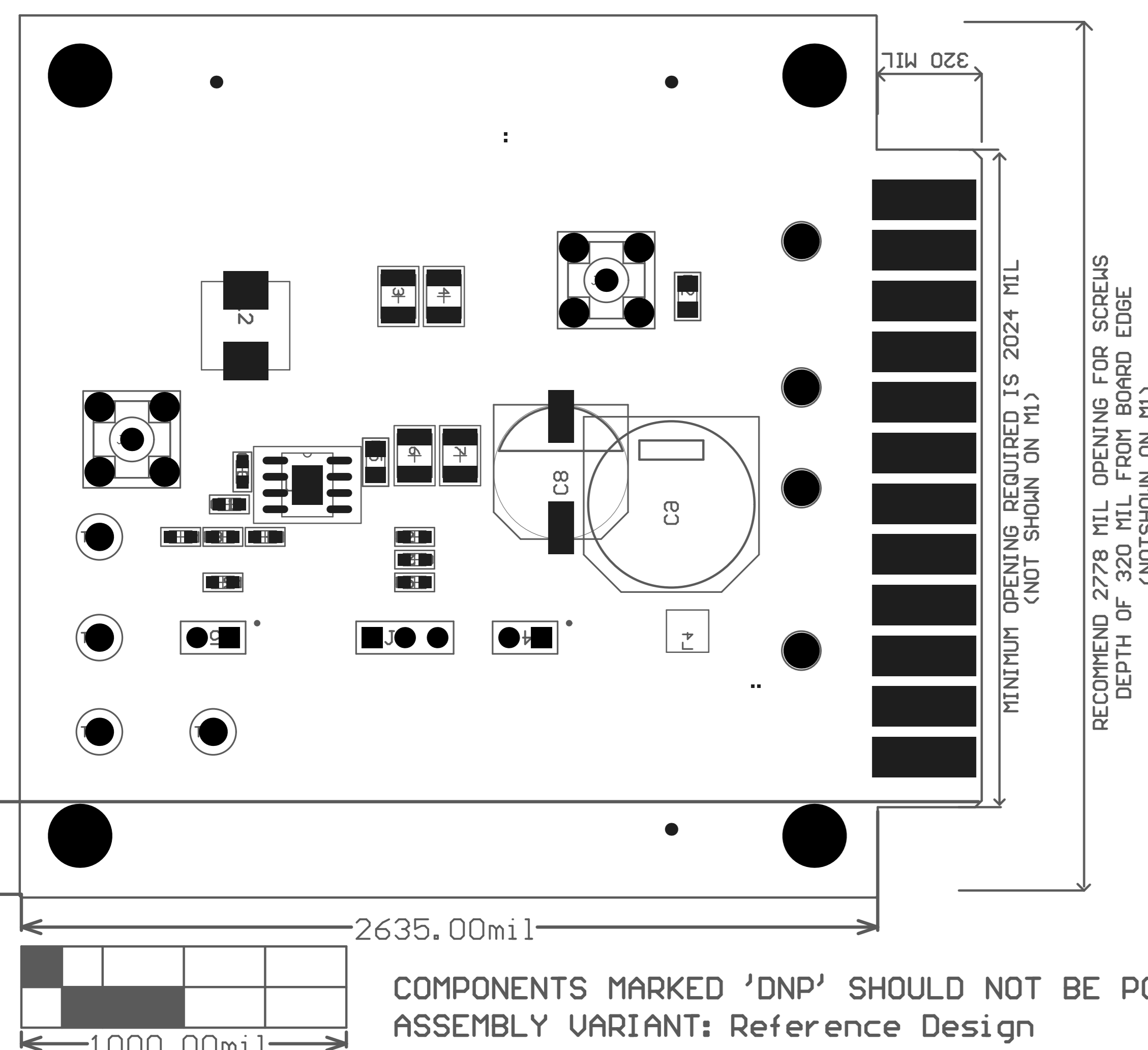
PROJECT TITLE:	.PRJ_Title
DESIGNED FOR:	.PRJ_Customer
FILE NAME:	PMP15016_Flying Shark.PcbDoc

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS --> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV: Not In VersionControl
LAYER NAME =					
PLOT NAME =	GENERATED	: 6/28/2016	3:14:07 PM	TEXAS INSTRUMENTS	

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

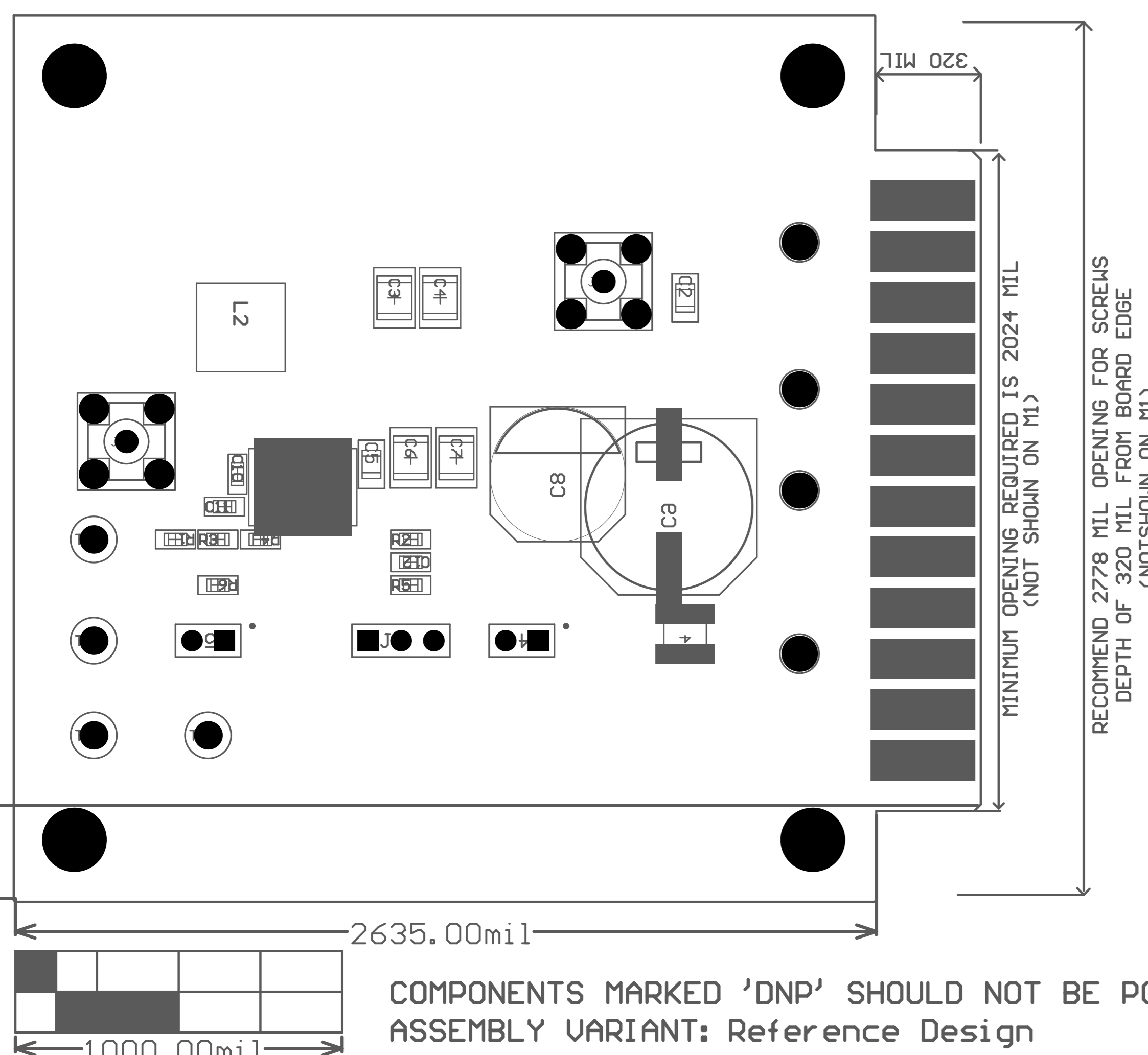
PROJECT TITLE: .PRJ_Title	
DESIGNED FOR: .PRJ_Customer	
FILE NAME: PMP15016_Flying Shark.PcbDoc	
ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS --> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



PCB VIEWED FROM TOP SIDE	BOARD #: .PRJ_Number	REV: .PCB_Rev	SUN REV: Not In VersionControl
LAYER NAME =			
PLOT NAME =	GENERATED : 6/28/2016	3:14:10 PM	TEXAS INSTRUMENTS

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

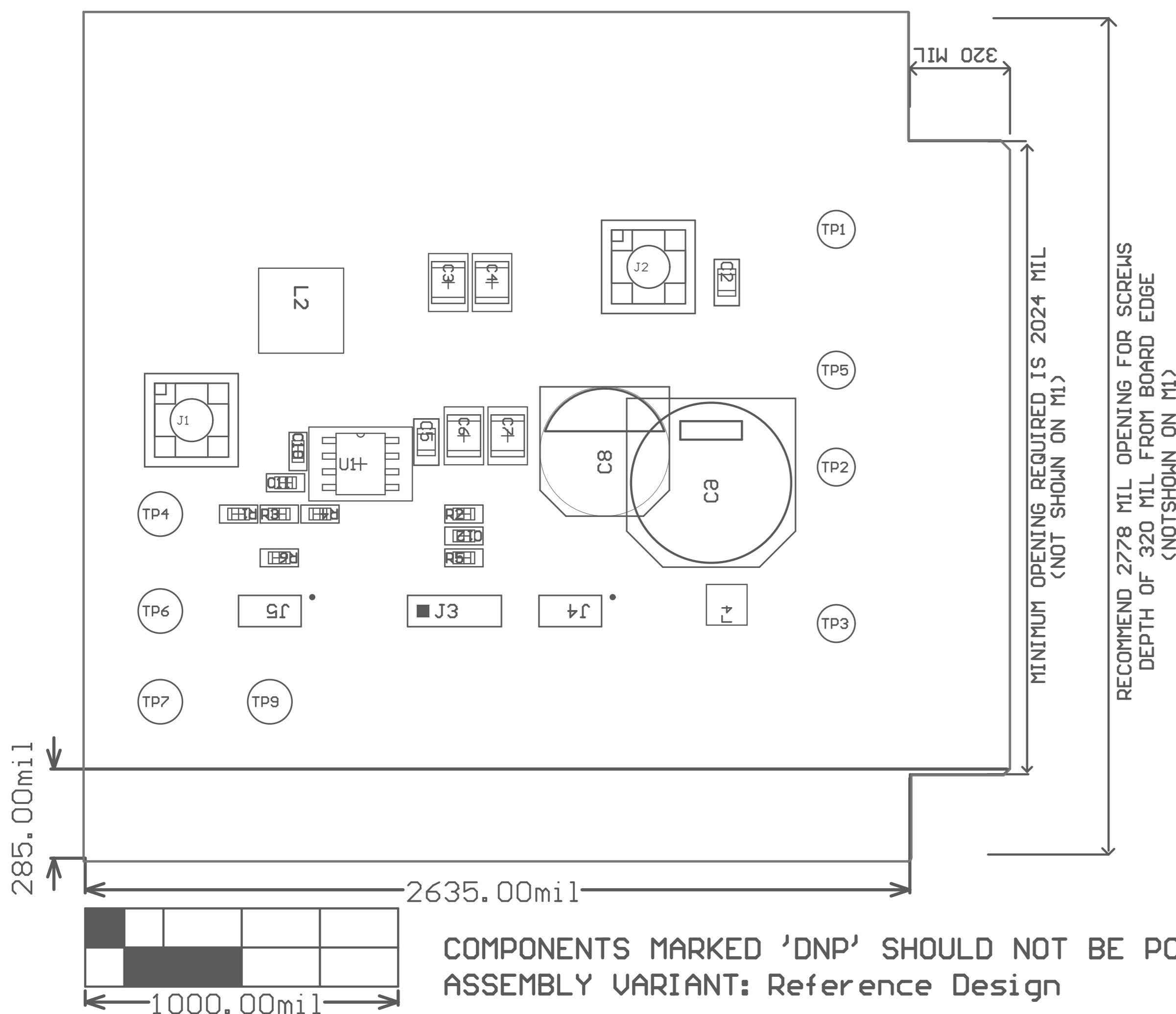
ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	

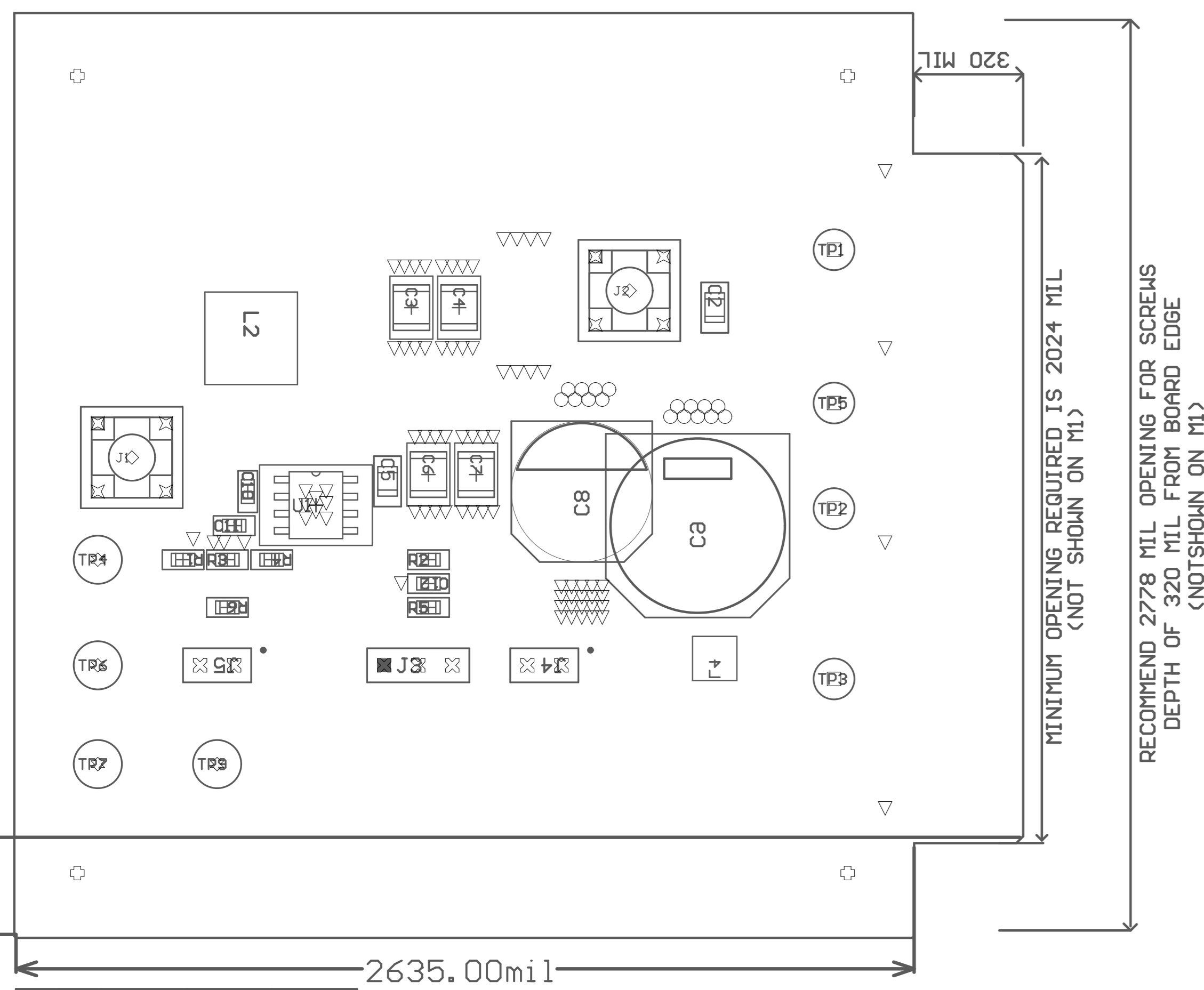


PCB VIEWED FROM TOP SIDE	BOARD #: .PRJ_Number	REV: .PCB_Rev	SUN REV: Not In VersionControl	Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.	ENGINEER: .PRJ_Engineer	LAYOUT BY: .PCB_Layout
LAYER NAME =					SCALE: 1.00	ALTIUM DESIGNER VERSION: 16.0.9.368
PLOT NAME =	GENERATED : 6/28/2016	3:14:13 PM	TEXAS INSTRUMENTS			

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS:	<input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____
TOLERANCE:	<input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2 <input type="checkbox"/> OTHER +/- _____
BOW & TWIST:	<input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2 <input type="checkbox"/> OTHER +/- _____
DRILLING:	
REFERENCE:	<input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES
PTH MIN COPPER THICKNESS:	<input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____
BOARD FINISH:	
SILKSCREEN:	<input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM
SILKSCREEN COLOR:	<input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____
SOLDER RESIST COLOR:	<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____
SURFACE FINISH:	<input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG <input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____
ARRAY/PANEL:	<input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1 <input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION:	<input type="checkbox"/> YES
BARE BOARD ELEC. TEST:	<input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER
MANUFACTURER'S UL:	<input type="checkbox"/> RAIL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK



PROJECT TITLE:	.PRJ_Title
DESIGNED FOR:	.PRJ_Customer
FILE NAME:	PMP15016_Flying Shark.PcbDoc

PCB VIEWED FROM TOP SIDE	BOARD #: .PRJ_Number	REV: .PCB_Rev	SUN REV: Not In VersionControl
LAYER NAME =			
PLOT NAME =	GENERATED : 6/28/2016	3:14:17 PM	TEXAS INSTRUMENTS

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

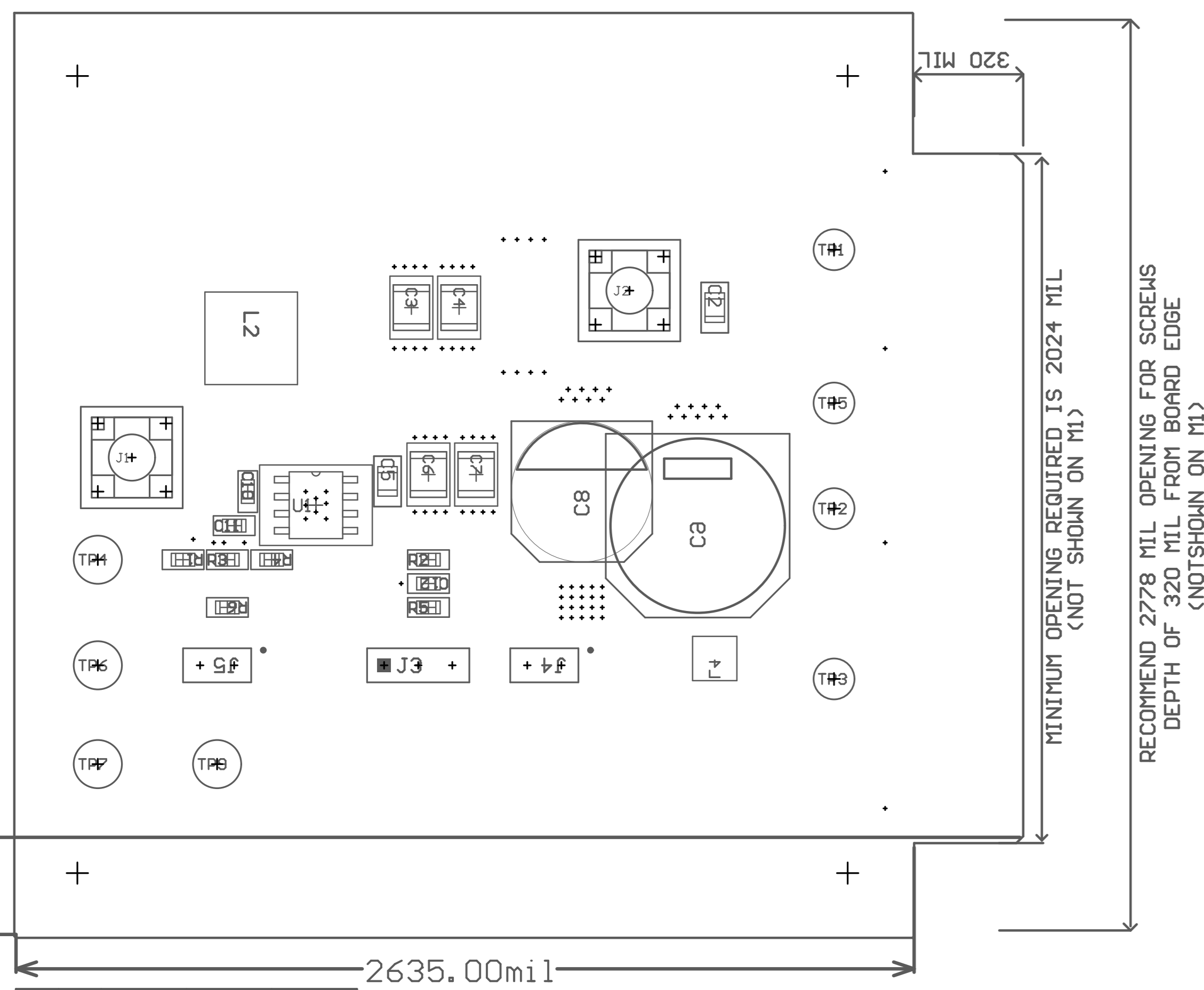
ENGINEER:	.PRJ_Engineer	LAYOUT BY:	.PCB_Layout
SCALE: 1.00		ALTIUM DESIGNER VERSION:	16.0.9.368

The Stackup Legend below this is static.
If you change the stackup, update the Legend.

Layer Stack Up Detail for: Ref_Design.PcbDoc			
Layer Name	Order Document	Copper Thickness	Dielectric Material
Top Solder Mask	(.GTS)		Solder Resist
Top Layer	(.GTL)	1.4mil	FR-4
Bottom Layer	(.GBL)	1.4mil	FR-4
Bottom Solder Mask	(.GBS)		Solder Resist

- Z21 ■ Install label in silkscreened box after final wash. Text shall be 8 pt font. Text shall be per the Label Table in the PDF schematic.
- Z22 ■ These assemblies are ESD sensitive, ESD precautions shall be observed.
- Z23 ■ These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
- Z24 ■ These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

DESIGN INFORMATION	
MIN. TRACK WIDTH:	<u>8</u> MIL
MIN. CLEARANCE:	<u>0.2</u> mm
MIN. VIA PAD SIZE:	<u>24</u> MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- <u>5</u> MIL, HOLES +/- <u>3</u> MIL	
MATERIAL:	
<input type="checkbox"/> FR-408 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER _____	
THICKNESS: <input checked="" type="checkbox"/> 62 MIL (1.6mm) +/-10% <input type="checkbox"/> OTHER _____	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/- _____	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC_DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1MIL <input type="checkbox"/> OTHER _____	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER _____	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER _____	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> ENEPIG	
<input type="checkbox"/> IMM. TIN/SILVER OR EQUIV <input type="checkbox"/> OTHER _____	
ARRAY/PANEL: <input type="checkbox"/> CUT AND TRIM PER MECH LAYER 1	
<input type="checkbox"/> N.C. ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBs TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTION: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S UL: <input type="checkbox"/> RAIL <input type="checkbox"/> METAL <input checked="" type="checkbox"/> SILK	



COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: Reference Design

PCB VIEWED FROM TOP SIDE	BOARD #:	.PRJ_Number	REV:	.PCB_Rev	SUN REV:	Not In VersionControl
LAYER NAME =						
PLOT NAME =	GENERATED	: 6/28/2016	3:14:20 PM	TEXAS INSTRUMENTS		

Texas Instruments (TI) and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. TI and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. TI and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

ENGINEER:	.PRJ_Engineer	LAYOUT BY:	.PCB_Layout
SCALE:	1.00	ALTIUM DESIGNER VERSION:	16.0.9.368

IMPORTANT NOTICE FOR TI REFERENCE DESIGNS

Texas Instruments Incorporated ("TI") reference designs are solely intended to assist designers ("Designer(s)") who are developing systems that incorporate TI products. TI has not conducted any testing other than that specifically described in the published documentation for a particular reference design.

TI's provision of reference designs and any other technical, applications or design advice, quality characterization, reliability data or other information or services does not expand or otherwise alter TI's applicable published warranties or warranty disclaimers for TI products, and no additional obligations or liabilities arise from TI providing such reference designs or other items.

TI reserves the right to make corrections, enhancements, improvements and other changes to its reference designs and other items.

Designer understands and agrees that Designer remains responsible for using its independent analysis, evaluation and judgment in designing Designer's systems and products, and has full and exclusive responsibility to assure the safety of its products and compliance of its products (and of all TI products used in or for such Designer's products) with all applicable regulations, laws and other applicable requirements. Designer represents that, with respect to its applications, it has all the necessary expertise to create and implement safeguards that (1) anticipate dangerous consequences of failures, (2) monitor failures and their consequences, and (3) lessen the likelihood of failures that might cause harm and take appropriate actions. Designer agrees that prior to using or distributing any systems that include TI products, Designer will thoroughly test such systems and the functionality of such TI products as used in such systems. Designer may not use any TI products in life-critical medical equipment unless authorized officers of the parties have executed a special contract specifically governing such use. Life-critical medical equipment is medical equipment where failure of such equipment would cause serious bodily injury or death (e.g., life support, pacemakers, defibrillators, heart pumps, neurostimulators, and implantables). Such equipment includes, without limitation, all medical devices identified by the U.S. Food and Drug Administration as Class III devices and equivalent classifications outside the U.S.

Designers are authorized to use, copy and modify any individual TI reference design only in connection with the development of end products that include the TI product(s) identified in that reference design. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER TI INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT OF TI OR ANY THIRD PARTY IS GRANTED HEREIN, including but not limited to any patent right, copyright, mask work right, or other intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information published by TI regarding third-party products or services does not constitute a license to use such products or services, or a warranty or endorsement thereof. Use of the reference design or other items described above may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

TI REFERENCE DESIGNS AND OTHER ITEMS DESCRIBED ABOVE ARE PROVIDED "AS IS" AND WITH ALL FAULTS. TI DISCLAIMS ALL OTHER WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, REGARDING THE REFERENCE DESIGNS OR USE OF THE REFERENCE DESIGNS, INCLUDING BUT NOT LIMITED TO ACCURACY OR COMPLETENESS, TITLE, ANY EPIDEMIC FAILURE WARRANTY AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

TI SHALL NOT BE LIABLE FOR AND SHALL NOT DEFEND OR INDEMNIFY DESIGNERS AGAINST ANY CLAIM, INCLUDING BUT NOT LIMITED TO ANY INFRINGEMENT CLAIM THAT RELATES TO OR IS BASED ON ANY COMBINATION OF PRODUCTS AS DESCRIBED IN A TI REFERENCE DESIGN OR OTHERWISE. IN NO EVENT SHALL TI BE LIABLE FOR ANY ACTUAL, DIRECT, SPECIAL, COLLATERAL, INDIRECT, PUNITIVE, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES IN CONNECTION WITH OR ARISING OUT OF THE REFERENCE DESIGNS OR USE OF THE REFERENCE DESIGNS, AND REGARDLESS OF WHETHER TI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

TI's standard terms of sale for semiconductor products (<http://www.ti.com/sc/docs/stdterms.htm>) apply to the sale of packaged integrated circuit products. Additional terms may apply to the use or sale of other types of TI products and services.

Designer will fully indemnify TI and its representatives against any damages, costs, losses, and/or liabilities arising out of Designer's non-compliance with the terms and provisions of this Notice.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2016, Texas Instruments Incorporated