

PRODUCT CHANGE NOTICE

PCN Form (D4-E000-73)

PCN#11-015

NOTIFICATION DATE: November 7, 2011

MODEL(S) AFFECTED:

HXG-122+, HXG-242+

EXTENT OF CHANGE:

- Change of fit and form, existing footprint compatible, new footprint provided
- No change of function or performance

EFFECT OF CHANGE:

- Change package from bottom-side-only soldering to castellated wrap-around terminations
- Case style change from LZ1624 to LZ1671
- Carrier tape orientation per TR-F78, compliant to EIA 481

REASON FOR CHANGE:

Enhanced customer ability to perform visual solder joint inspection

EFFECTIVE DATE OF CHANGE:

Immediate

DELIVERY:

Immediate

ATTACHMENTS:

- Refer to ww.minicircuits.com for new datasheet
- Report on interchangeability, including case styles
- Carrier tape orientation per TR-F78

QUESTIONS?

PLEASE CONTACT US.

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Attachment to [PCN11-015](#)

HXG-122+ and HXG-242+ footprint compatibility Original vs. New

Overview

Models HXG-122+ and HXG-242+ are high dynamic range MSiP Modules using a PCB base with sealed ceramic covers.

The initial released outline is being upgraded to include castellated leads and wrap-around terminations for signal and ground, enabling inspection of the solder attachment through visible solder fillet. The upgraded version also be based upon a PCB base with ceramic cover, and will be offered in a new outline drawing.

In determining the compatibility of the new HXG case versus the original HXG case, a detailed study of the case and PCB layout has been performed. The resulting changes in case style and PCB layout are backward compatible with the initially released model.

Revision Matrix

Reference	Description	Case Style No.	PCB Layout	Eval. Board	T & R
Original case	Blind signal and ground pads, on the underside of the model	LZ1624	98-PL-345	TB-622+	F34
New Case	Signal and ground with castellated leads and wrap-around terminations	LZ1671	98-PL-350	TB-641+ TB -641-1+	F78

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Conclusion

Both case styles may be used with the alternate PCB Layout's; however, in the case of the *new* Case Style (LZ1671) used with the *original* PCB Layout (PL-345), a solder fillet will not be observable at the castellated leads. (See Appendix 1 and Appendix 2 for detailed assessments)

Reference	Case Style No.	PL-345	PL-350
Original case	LZ1624	—————	Compatible
New Case	LZ1671	Compatible, will not observe solder fillet	—————

Detailed Description

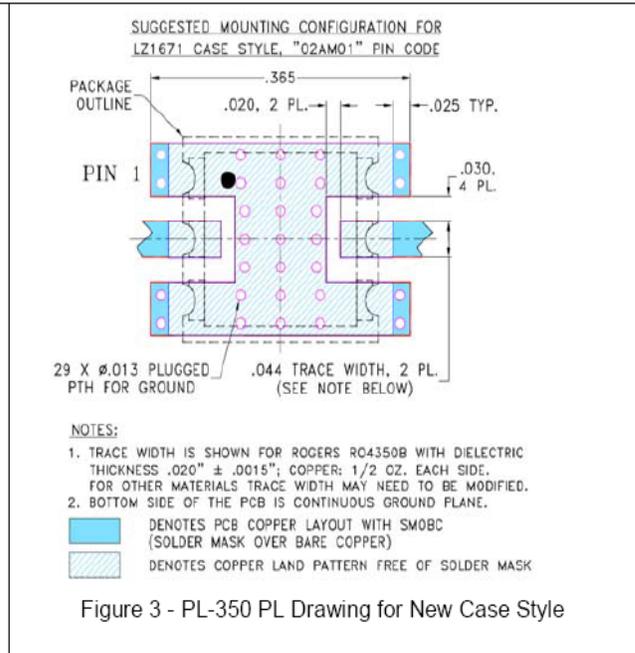
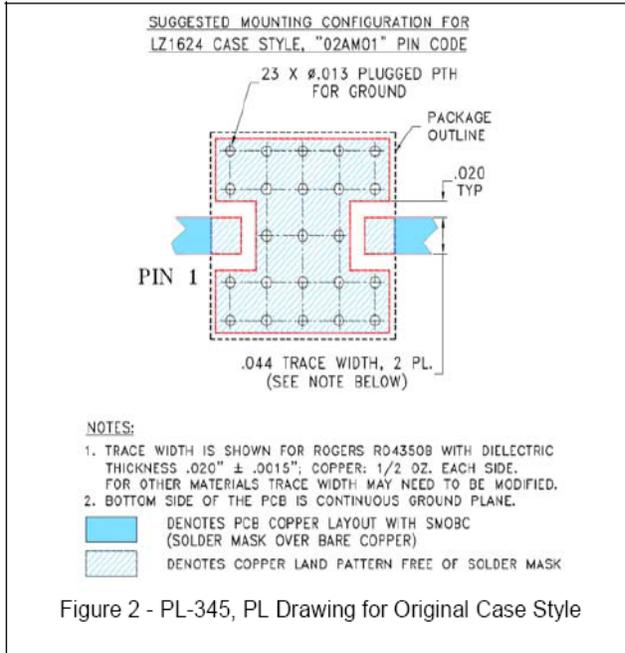
Photos: Original and New Case Styles



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PCB Layouts Existing vs. Proposed



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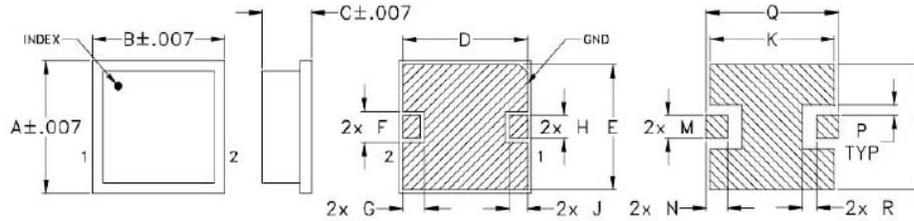
Case Style

LZ

Outline Dimensions

LZ1624

PCB Land Pattern



Suggested Layout
Pattern to be within ± .002

CASE #	A	B	C	D	E	F	G	H	J	K	L	M
LZ1624	.252 (6.40)	.252 (6.40)	.094 (2.40)	.237 (6.01)	.237 (6.0)	.060 (1.53)	.042 (1.07)	.044 (1.13)	.034 (.87)	.237 (6.01)	.237 (6.01)	.044 (1.13)

CASE #	N	P	Q	R	WT. GRAM
LZ1624	.041 (1.04)	.020 (.51)	.251 (6.38)	.20 (.51)	0.20

Dimensions are in inches (mm). Tolerances: 3 PL ± .003 unless otherwise specified

Notes:

1. Case material: Ceramic.
2. Base material: 20 mil thk laminate.
3. Termination finish: 3-5 μinch (0.075-0.125 microns) gold plating over 120-240 μinch (3-6 microns) low stress electroless nickel.

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Figure 4 - Existing Outline Drawing (LZ-1624)

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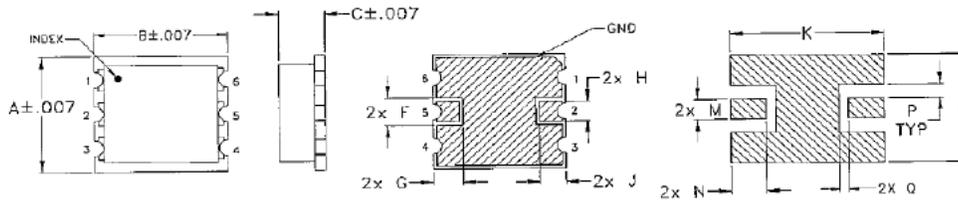
Case Style

LZ

LZ1671

Outline Dimensions

PCB Land Pattern



Suggested Layout
Pattern to be within ±.002

ASE #	A	B	C	D	E	F	G	H	J	K	L	M
LZ1671	.252 (6.40)	.274 (6.96)	.094 (2.40)	- -	- -	.060 (1.53)	.061 (1.55)	.044 (1.12)	.053 (1.35)	.315 (8.00)	.237 (6.02)	.045 (1.14)

CASE #	N	P	Q	R	WT. GRAM
LZ1671	.073 (1.85)	.030 (.76)	.020 (.51)	- -	0.20

Dimensions are in inches (mm). Tolerances: 3 Pl. ± .003 unless otherwise specified

Notes:

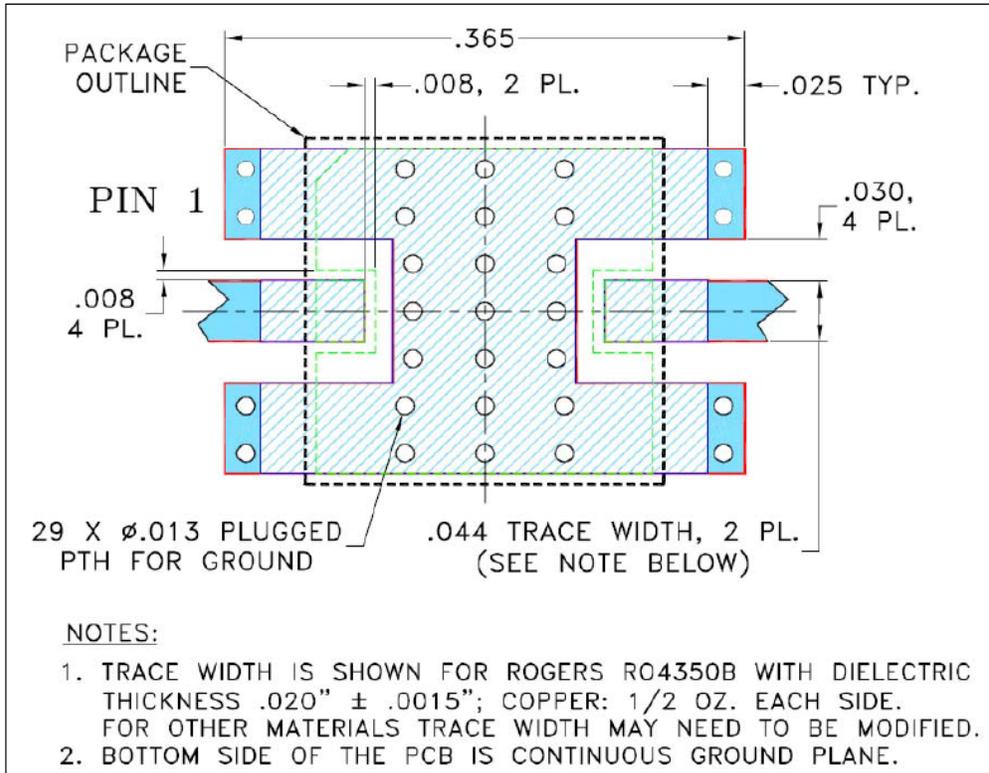
1. Case material: Ceramic.
2. Base material: 20 mil thk laminate.
3. Termination finish: 3-5 μinch (0.075-0.125 microns) gold plating over 120-240 μinch (3-6 microns) low stress electroless nickel.

Figure 5 - New Outline Drawing (LZ-1671)

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Appendix 1 - Assessment of Original Case Style unit mounted on New PCB Land Pattern



HXG

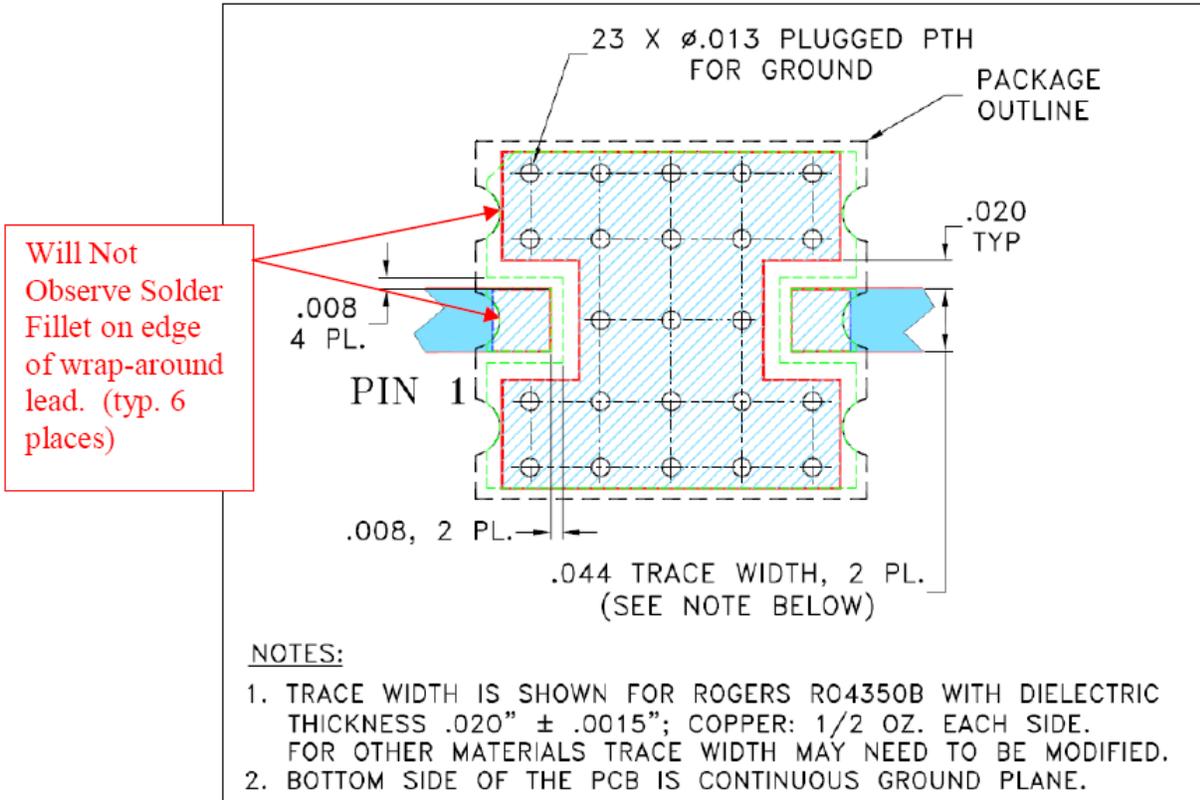
Color	Description
Black-dashed	Outline of HXG Package, existing case style LZ1624
Green-dashed	Outline of copper underneath HXG unit
	Solder mask on bare copper (SMOBC)
	Copper Pattern free of solder mask
Black solid circles	Plated Thru Holes to ground

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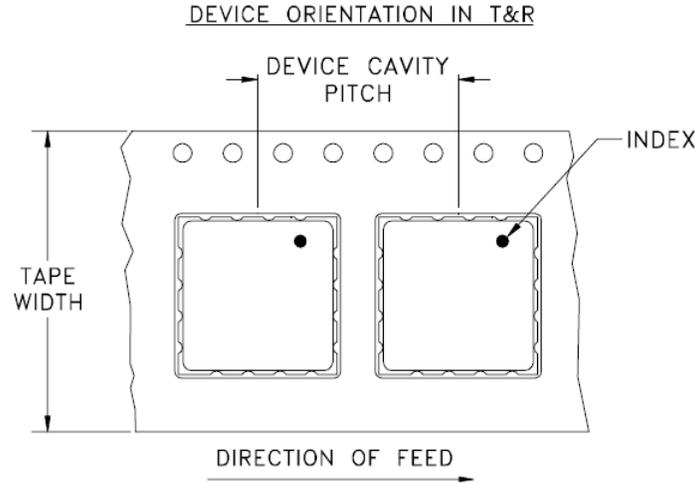
Appendix 2 – Assessment of New Case Style unit mounted on Original PCB Land Pattern



Color	Description
Black-dashed	Outline of HXG Package, new case style LZ1671
Green-dashed	Outline of copper underneath HXG unit
	Solder mask on bare copper (SMOBC)
	Copper Pattern free of solder mask
Black solid circles	Plated Thru Holes to ground

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Tape & Reel Packaging TR-F78



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel see note
16	12	13	500, 1000
		7	20
			50
			100
			200

Note: Please consult individual model data sheet to determine device per reel availability.

Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

Go to: www.minicircuits.com/pages/pdfs/tape.pdf



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