Pulse A YAGEO Company | LARSEN Antennas

TECHNICAL DATA SHEET

Description: 2012 1.57G&2.4G&5GHz Triplexer

PART NUMBER: TPX2012LL94R1525A

Features:

- Compact size : 2.0x1.2x0.9mm
- RoHS compliant

Applications:

- WLAN, 802.11a/b/g/n
- ISM Band
- GPS

ELECTRICAL SPECIFICATIONS

DESCRIPTION	VALUE		
Pass Band	Low Band	Middle Band	High Band
	1560~1610MHz	2400~2500MHz	4900~5950MHz
Insertion loss	0.6dB (Max) at 25℃	0.7dB (Max) at 25℃	0.8dB (Max) at 25℃
V.S.W.R /Return-Loss	2.0(Max)/10.0dB(Min)	2.0(Max) /10.0dB(Min)	2.0(Max) /10.0dB(Min)
Attenuation	16dB(Min).@2.4~2.5GHz 14dB(Min).@4.8~6.0GHz	17dB(Min).@1.56~1.605GHz 17.5dB(Min).@4.8~5.0GHz 10dB(Min).@7.2~7.5GHz	30dB(Min).@0.86~0.96GHz 25dB(Min).@1.545~1.605GHz 25dB(Min).@1.71~1.99GHz 28dB(Min).@2.17GHz 28dB(Min).@2.4~2.5GHz 15dB(Min).@9.8~11.8GHz
Isolation	Low to Middle 18dB(Min).@2.4~2.5GHz 9dB(Min).@4.8~6.0GHz	Middle to High 17dB(Min).@1.56~1.605GHz 15dB(Min).@4.8~5.95GHz	Low to High 25dB(Min).@1.560~1.605GHz 25dB(Min).@2.4~2.5GHz
Operating Temperature	-40 ~ 85℃		
Dimension	2.0 x 1.2 x 0.9mm		

RoHS COMPLIANT

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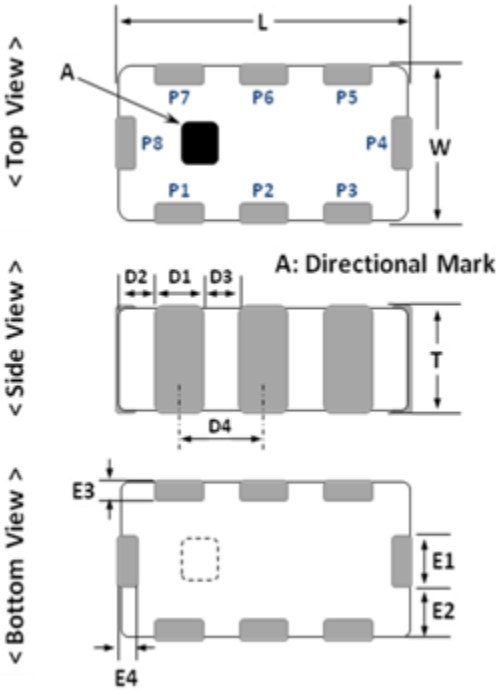
MECHANICAL DIMENSION

Outline



Termination

Terminal name	Dimension
P1	GND
P2	Common
P3	GND
P4	Low band
P5	GND
P6	Middle band
P7	GND
P8	High band

Mechanical

	Dimension
L (mm)	2.00±0.15
W (mm)	1.25±0.15
T (mm)	0.90±0.15
D1 (mm)	0.35±0.15
D2 (mm)	0.175±0.15
D3 (mm)	0.30±0.15
D4 (mm)	0.65±0.15
E1 (mm)	0.35±0.15
E2 (mm)	0.45±0.15
E3 (mm)	0.25±0.15
E4 (mm)	0.25±0.15

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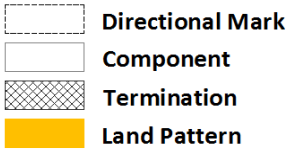
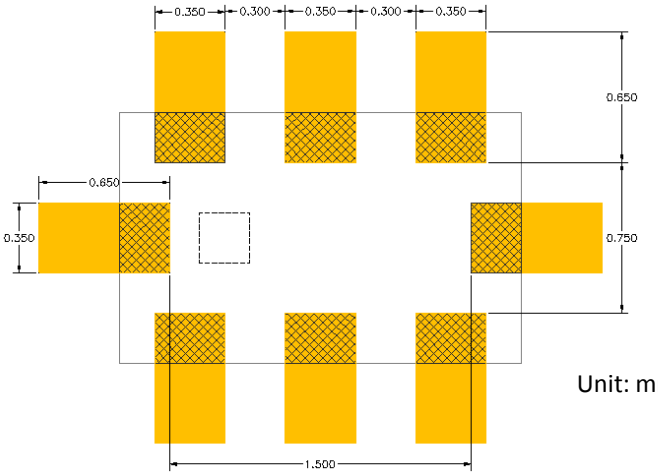
Recommend Land Pattern

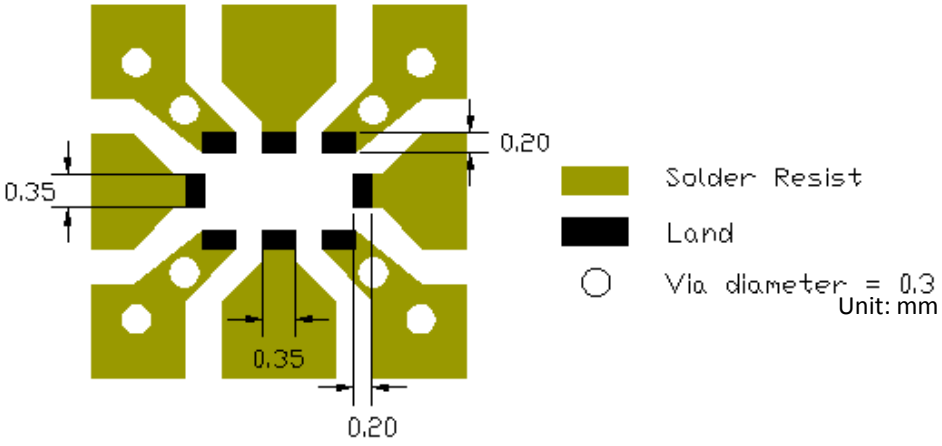




Unit: mm

Reference design of evaluation board

Reference design of EVB



Unit: mm

Line width should be designed to match 50Ω characteristic impedance, depending on PCB material and thickness.

Reference design of evaluation board

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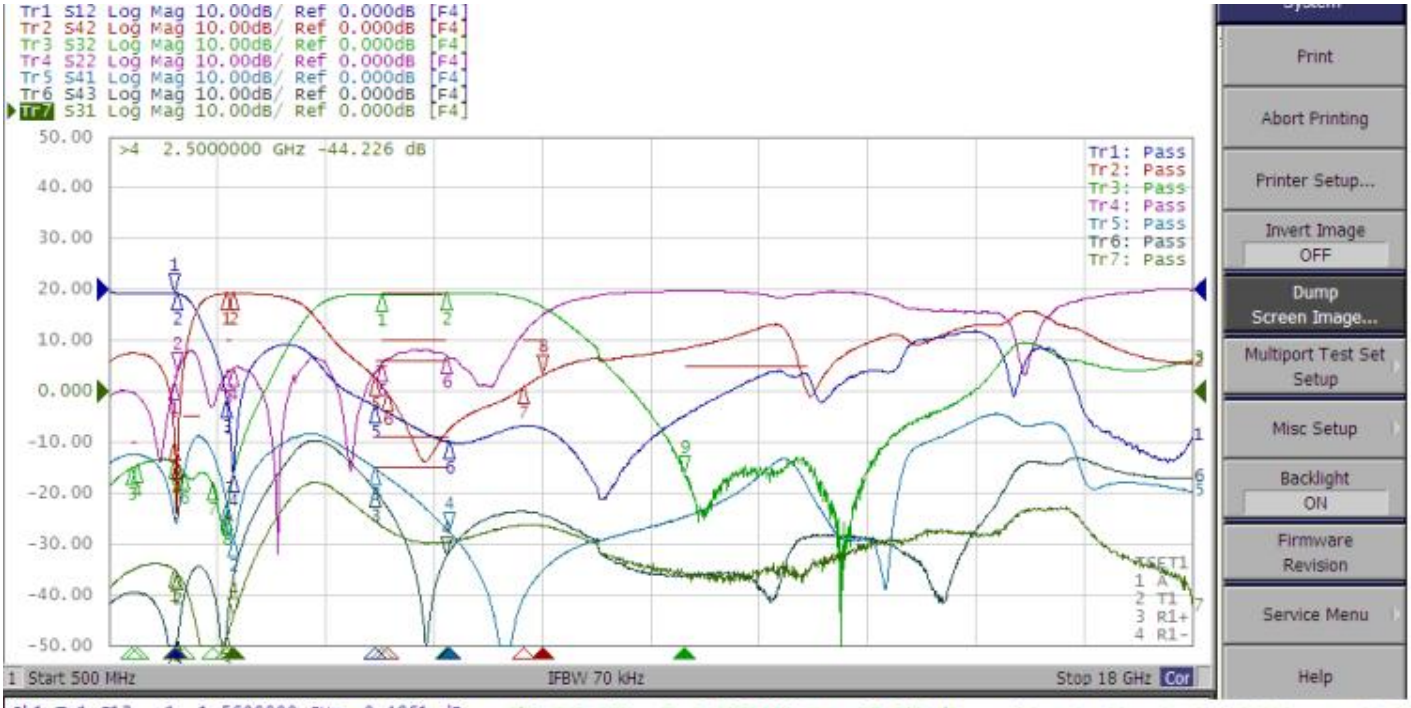
ELECTRICAL PERFORMANCES



Ch1 Tr1 S12	1	1.5600000 GHz	-0.4861 dB	Ch1 Tr3 S32	7	2.1700000 GHz	-38.012 dB	Ch1 Tr7 S31	3	2.4000000 GHz	-48.002 dB
Ch1 Tr1 S12	2	1.6100000 GHz	-0.5731 dB	Ch1 Tr3 S32	8	2.4000000 GHz	-43.962 dB	Ch1 Tr7 S31	>4	2.5000000 GHz	-44.226 dB
Ch1 Tr1 S12	3	2.4000000 GHz	-21.698 dB	Ch1 Tr3 S32	9	9.8000000 GHz	-36.227 dB				
Ch1 Tr1 S12	4	2.5000000 GHz	-36.152 dB	Ch1 Tr4 S22	1	1.5600000 GHz	-18.152 dB				
Ch1 Tr1 S12	5	4.8000000 GHz	-22.650 dB	Ch1 Tr4 S22	2	1.6100000 GHz	-16.023 dB				
Ch1 Tr1 S12	6	6.0000000 GHz	-29.728 dB	Ch1 Tr4 S22	3	2.4000000 GHz	-16.218 dB				
Ch1 Tr2 S42	1	2.4000000 GHz	-0.5368 dB	Ch1 Tr4 S22	4	2.5000000 GHz	-15.298 dB				
Ch1 Tr2 S42	2	2.5000000 GHz	-0.5011 dB	Ch1 Tr4 S22	5	4.9000000 GHz	-14.456 dB				
Ch1 Tr2 S42	3	1.5600000 GHz	-29.930 dB	Ch1 Tr4 S22	6	5.9500000 GHz	-12.830 dB				
Ch1 Tr2 S42	4	1.6050000 GHz	-33.808 dB	Ch1 Tr5 S41	1	2.4000000 GHz	-21.927 dB				
Ch1 Tr2 S42	6	5.0000000 GHz	-20.213 dB	Ch1 Tr5 S41	2	2.5000000 GHz	-28.885 dB				
Ch1 Tr2 S42	7	7.2000000 GHz	-18.900 dB	Ch1 Tr5 S41	3	4.8000000 GHz	-14.963 dB				
Ch1 Tr2 S42	8	7.5000000 GHz	-16.586 dB	Ch1 Tr5 S41	4	6.0000000 GHz	-27.431 dB				
Ch1 Tr3 S32	1	4.9000000 GHz	-0.6462 dB	Ch1 Tr6 S43	1	1.5600000 GHz	-54.006 dB				
Ch1 Tr3 S32	2	5.9500000 GHz	-0.5786 dB	Ch1 Tr6 S43	2	1.6050000 GHz	-48.699 dB				
Ch1 Tr3 S32	3	860.00000 MHz	-34.916 dB	Ch1 Tr6 S43	3	4.8000000 GHz	-19.225 dB				
Ch1 Tr3 S32	4	960.00000 MHz	-34.301 dB	Ch1 Tr6 S43	4	5.9500000 GHz	-32.250 dB				
Ch1 Tr3 S32	5	1.5450000 GHz	-33.624 dB	Ch1 Tr7 S31	1	1.5600000 GHz	-34.880 dB				
Ch1 Tr3 S32	6	1.7100000 GHz	-35.703 dB	Ch1 Tr7 S31	2	1.6050000 GHz	-35.448 dB				

- Measured on Agilent E5071C Network Analyzer
- Common port: Port 2 (Return loss S22)
- Low band port: Port 1 (Low band insertion loss S12)
- Middle band port Port4(Middle band insertion loss S42)
- High band port: Port 3 (High band insertion loss S32)

Frequency Characteristics

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REVISION HISTORY

Revision	Date	Description
Version 1	Mar. 11, 2021	- New issue

RoHS COMPLIANT