

1.575/2.4/5GHz 2012 Triplexer: TPX2012R15254K95

Applications:

WLAN, 802.11b/g, ISM Band GPS...

Features

SMD, high reliability, ultra Impact...



Part number

<u>TPX</u>	<u>2012</u>	<u>R</u>	<u>1525</u>	<u>4K</u>	<u>95</u>
(1)	(2)	(3)	(4)	(5)	

(1)Size Code	2.0x1.2mm
(2) Packing	Tape and reel
(3) Frequency	1.575/2.4/5GHz
(4) Packing Number	4K
(5)Type	95

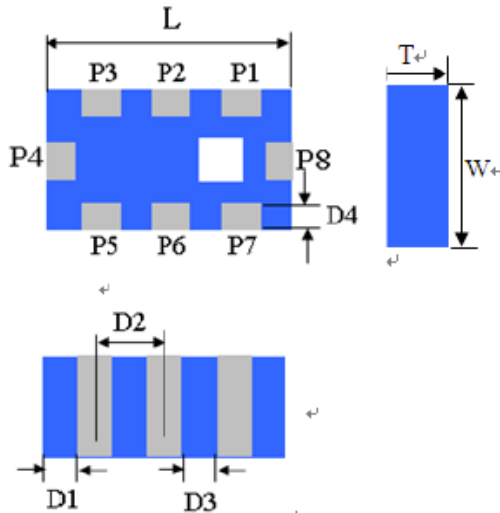
Electrical Specification

DESCRIPTION	VALUE		
Pass Band	LOW Band	Middle Band	High Band
	1570~1610MHz	2400~2500MHz	4900~5950MHz
Insertion Loss	0.8dB (Max) at 25°C	0.7dB (Max) at 25°C	0.8dB (Max) at 25°C
VSWR	2.0(Max)/10.0dB(Min)	2.0(Max) /10.0dB(Min)	1.6(Max) /13.0dB(Min)
Attenuation	20dB(Min).@2.4~2.5GHz 20dB(Min).@4.8~6.0GHz	17.5dB(Min).@4.8~5.0GHz 10dB(Min).@7.2~7.5GHz 10dB(Min).@9.6~10.0GHz	27dB(Min).@0.86~0.96GHz 25dB(Min).@1.545~1.605GHz 25dB(Min).@1.71~1.99GHz 30dB(Min).@2.17GHz 8dB(Min).@8.1GHz 15dB(Min).@8.82~9.8GHz 27dB(Min).@9.8~10.76GHz 25dB(Min).@10.76~11.8GHz
Isolation	Middle Band to High Band: 17dB(Min). @4.8~5.0GHz Middle Band to Low Band: 20dB(Min).@1.559~1.606GHz High Band to Low Band: 25dB(Min). @1.559~1.606GHz		
Operating Temperature	-40 ~ +85 °C		

The specification is defined on EVB.

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Dimension and Terminal Configuration



Dimension (mm)	
L (mm)	2.00 ± 0.15
W (mm)	1.25 ± 0.15
T (mm)	0.90 ± 0.15
P1 (mm)	0.40 ± 0.15
P2 (mm)	0.40 ± 0.15
P3 (mm)	0.40 ± 0.15
P4 (mm)	0.50 ± 0.15
P5 (mm)	0.40 ± 0.15
P6 (mm)	0.40 ± 0.15
P7 (mm)	0.40 ± 0.15
P8 (mm)	0.50 ± 0.15
D1 (mm)	0.20 ± 0.15
D2 (mm)	0.65 ± 0.10
D3 (mm)	0.35 ± 0.15
D4 (mm)	0.30 ± 0.15

No.	Terminal Name
P1	Ground
P2	Common port
P3	Ground
P4	Low band port
P5	Ground
P6	High band port
P7	Ground
P8	Middle band port

P.S : Symmetrical,

No direction

Evaluation Board Reference

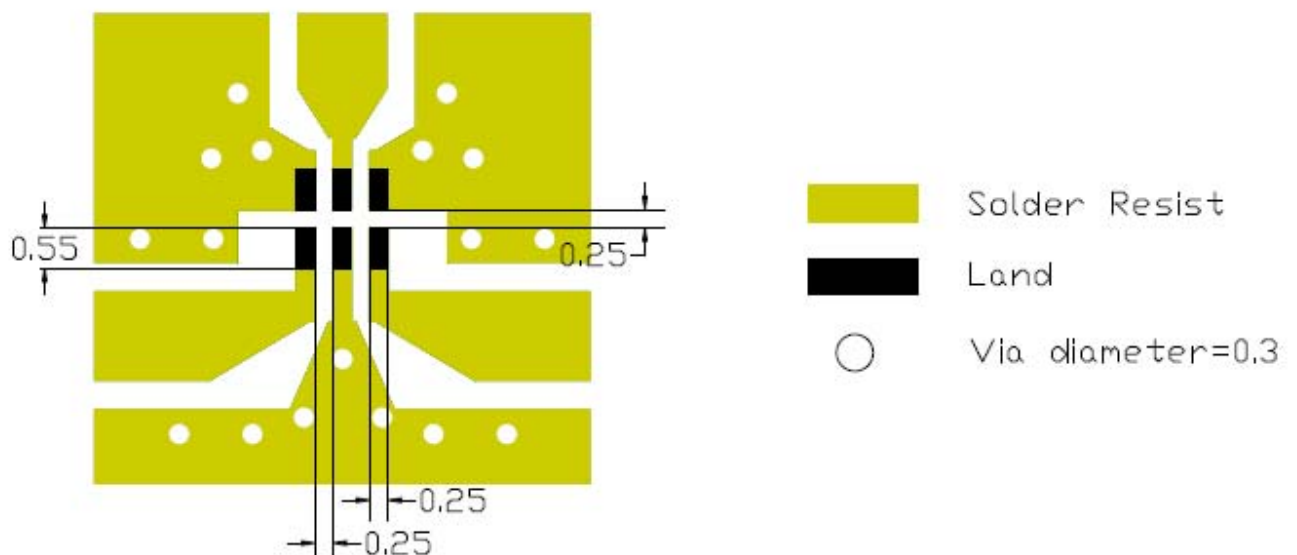
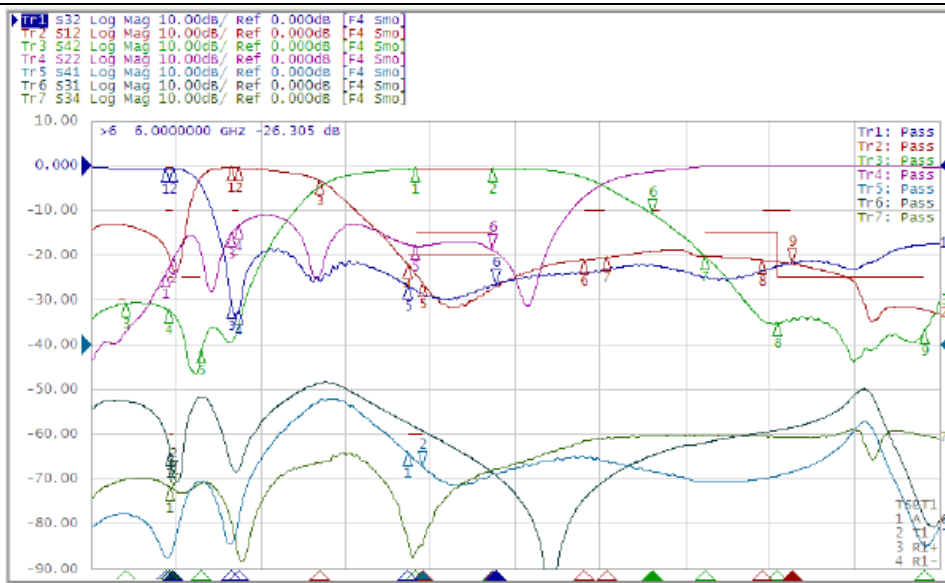


Fig.2 Reference design of evaluation board

Electrical Characteristics



- Measured on Agilent E5071C Network Analyzer
- Common port: Port 2 (Return loss S22)
- Low band port: Port 3 (Low band insertion loss S32)
- Middle band port Port 1 (Middle band insertion loss S12)
- High band port: Port 4 (High band insertion loss S42)

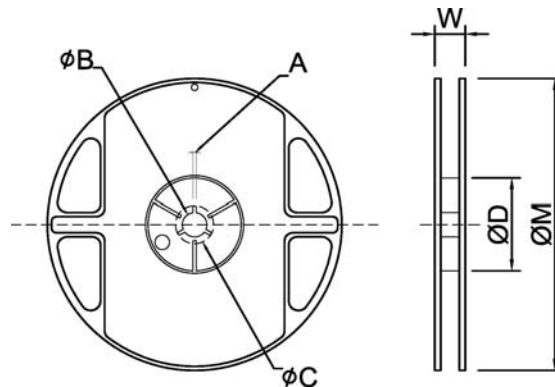
ch1	Tr1	S32	1	1.500000	GHz	-0.5586	dB	ch1	Tr4	S22	1	1.500000	GHz	-23.867	dB
ch1	Tr1	S32	2	1.610000	GHz	-0.5791	dB	ch1	Tr4	S22	2	1.610000	GHz	-20.476	dB
ch1	Tr1	S32	3	2.400000	GHz	-30.879	dB	ch1	Tr4	S22	3	2.400000	GHz	-14.974	dB
ch1	Tr1	S32	4	2.500000	GHz	-32.204	dB	ch1	Tr4	S22	4	2.500000	GHz	-13.230	dB
ch1	Tr1	S32	5	4.800000	GHz	-26.721	dB	ch1	Tr4	S22	5	4.900000	GHz	-17.736	dB
ch1	Tr1	S32	>6	6.000000	GHz	-26.305	dB	ch1	Tr4	S22	6	5.950000	GHz	-18.567	dB
ch1	Tr2	S12	1	2.400000	GHz	-0.5684	dB	ch1	Tr5	S41	1	4.800000	GHz	-23.936	dB
ch1	Tr2	S12	2	2.500000	GHz	-0.5735	dB	ch1	Tr5	S41	2	5.000000	GHz	-26.923	dB
ch1	Tr2	S12	3	3.600000	GHz	-3.2768	dB	ch1	Tr6	S31	1	1.559000	GHz	-23.813	dB
ch1	Tr2	S12	4	4.800000	GHz	-21.918	dB	ch1	Tr6	S31	2	1.606000	GHz	-28.857	dB
ch1	Tr2	S12	5	5.000000	GHz	-26.187	dB	ch1	Tr7	S34	1	1.559000	GHz	-31.531	dB
ch1	Tr2	S12	6	7.200000	GHz	-20.939	dB	ch1	Tr7	S34	2	1.606000	GHz	-31.979	dB
ch1	Tr2	S12	7	7.500000	GHz	-20.324	dB								
ch1	Tr2	S12	8	9.600000	GHz	-20.905	dB								
ch1	Tr2	S12	9	10.000000	GHz	-21.743	dB								
ch1	Tr3	S42	1	4.900000	GHz	-0.6100	dB								
ch1	Tr3	S42	2	5.950000	GHz	-0.6780	dB								
ch1	Tr3	S42	3	960.00000	MHz	-30.459	dB								
ch1	Tr3	S42	4	1.545000	GHz	-32.103	dB								
ch1	Tr3	S42	5	1.990000	GHz	-41.089	dB								
ch1	Tr3	S42	6	8.100000	GHz	-10.656	dB								
ch1	Tr3	S42	7	8.820000	GHz	-20.082	dB								
ch1	Tr3	S42	8	9.800000	GHz	-34.917	dB								
ch1	Tr3	S42	9	11.800000	GHz	-36.619	dB								

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Taping Specifications

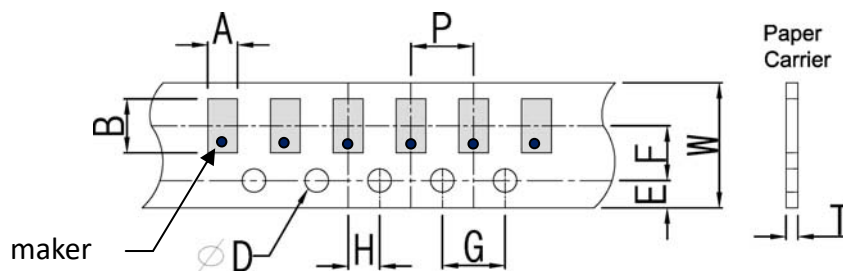
Reel and Taping Specification

Reel Specification



TYPE	SIZE		A	ψB	ψC	ψD	W	ψM
2012	7"	4K/Reel	2.0 ± 0.5	13.5 ± 1.0	21 ± 1.0	60 ± 1.0	11.5 ± 2.0	178 ± 2.0

Tapping Specification

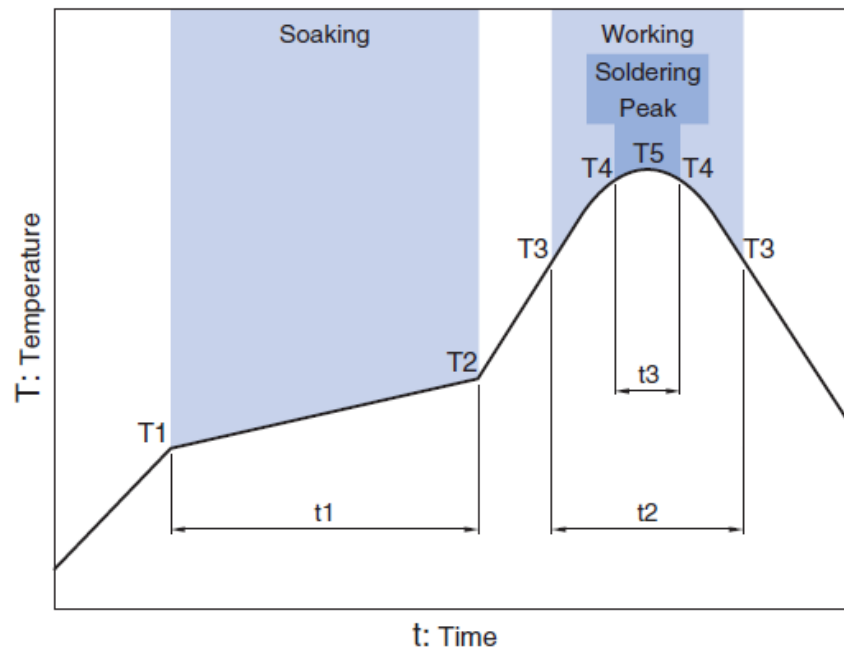


Packaging	Type	A	B	W	E	F	G	H	T	ψD	P
Paper Type	2012	1.50 ± 0.20	2.30 ± 0.20	8.0 ± 0.20	1.75 ± 0.10	3.5 ± 0.05	4.0 ± 0.10	2.0 ± 0.05	0.75 ± 0.10	$1.50^{+0.10}_{-0}$	4.0 ± 0.1

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Recommended Reflow Profile

Pb free solder



Soaking			Working		Soldering		Peak
Temp.		Time	Temp.	Time	Temp.	Time	Temp.
T1	T2	t1	T3	t2	T4	t3	T5
150°C	180°C	60 to 120sec	230°C	more than 30sec	247 to 253°C	within 10sec	260°C Max.