

2.4&5GHz 1608 Diplexer: LDP1608R2455L206

Applications:

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

Features

SMD, high reliability, ultra-Impact...

Part number

LDP 1608 R 2455 L2 06
(1) (2) (3) (4) (5) (6)

(1) Product code	LTCC-DPX
(2) Size Code	1.6x0.8mm
(3) Packing	Tape and reel
(4) Frequency	2.4&5GHz
(5) Series	L2
(6) Type	06

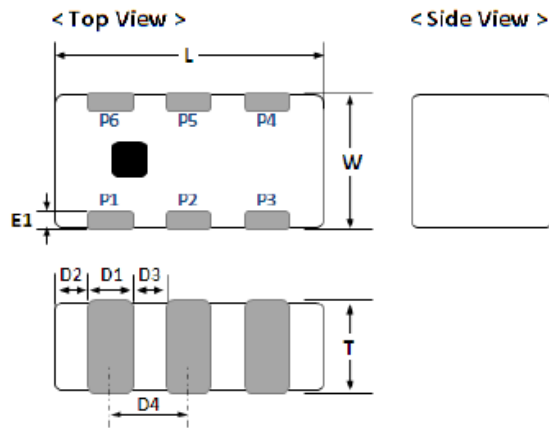
Electrical Specification

DESCRIPTION	VALUE	
Pass Band	Low Band	High Band
	2400~2500MHz	4900~6000MHz
Insertion Loss	0.50dB max.	0.75dB max.
Return Loss	12.0dB min.	12.0dB min.
Attenuation	30dB min. @4800~5000MHz 32dB min. @7200~7500MHz	27dB min. @2400~2500MHz 27dB min. @10300~11700MHz 20dB min. @15450~16200MHz
Isolation	32dB min. @2400~2500MHz 32dB min. @4800~5950MHz	
Operating Temperature	-40 ~ +85 °C	

The specification is defined on EVB.

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Dimension and Terminal Configuration



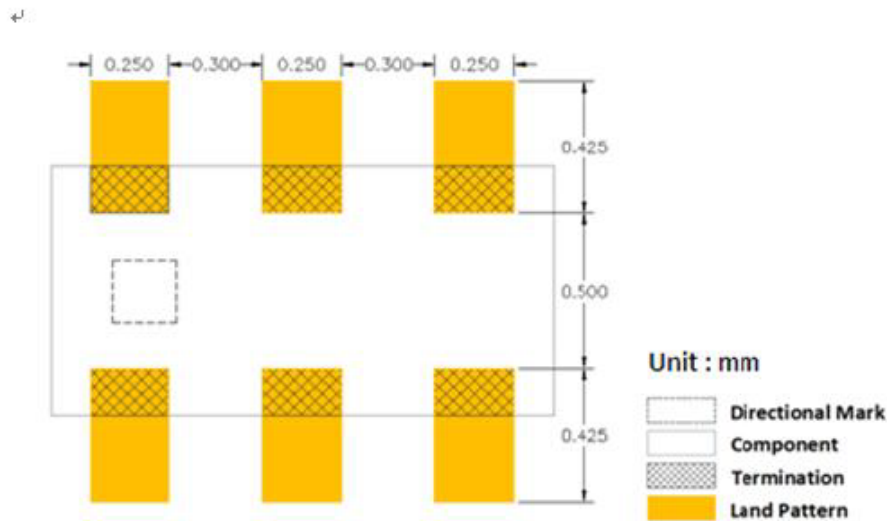
Dimension (mm)	
L (mm)	1.60 ± 0.15
W (mm)	0.80 ± 0.15
T (mm)	0.60 ± 0.15
D1 (mm)	0.25 ± 0.10
D2 (mm)	0.125 ± 0.10
D3 (mm)	0.30 ± 0.10
E1 (mm)	0.15 ± 0.10

No.	Terminal Name
P1	GND
P2	Common
P3	GND
P4	Low band
P5	GND
P6	High band

*P.S : Symmetrical,
No direction*

Evaluation Board Reference

Recommended Land Pattern



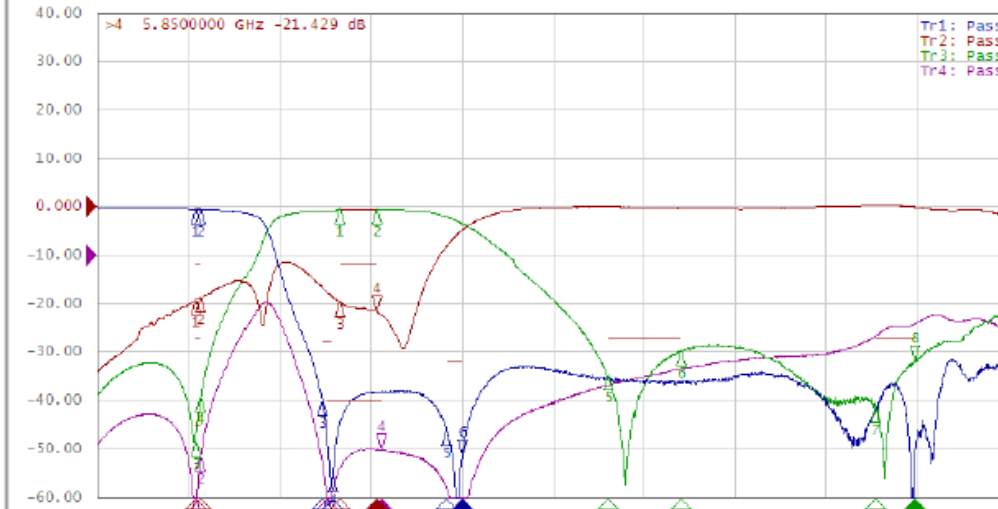
Recommended PCB Pattern



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Electrical Characteristics

Tr1: S12 Log Mag 10.00dB/ Ref 0.000dB [F3]
 Tr2: S22 Log Mag 10.00dB/ Ref 0.000dB [F3]
 Tr3: S32 Log Mag 10.00dB/ Ref 0.000dB [F3]
 Tr4: S13 Log Mag 10.00dB/ Ref 0.000dB [F3]



1 Start 500 MHz	IFBW 70 kHz	Stop 18 GHz	Cor
Ch1 Tr1 S12 1	2.4000000 GHz	-0.3129 dB	
Ch1 Tr1 S12 2	2.5000000 GHz	-0.3561 dB	
Ch1 Tr1 S12 3	4.8000000 GHz	-39.864 dB	
Ch1 Tr1 S12 4	5.0000000 GHz	-55.749 dB	
Ch1 Tr1 S12 5	7.2000000 GHz	-46.123 dB	
Ch1 Tr1 S12 6	7.5000000 GHz	-51.216 dB	
Ch1 Tr2 S22 1	2.4000000 GHz	-19.163 dB	
Ch1 Tr2 S22 2	2.5000000 GHz	-18.623 dB	
Ch1 Tr2 S22 3	5.1500000 GHz	-19.633 dB	
Ch1 Tr2 S22 >4	5.8500000 GHz	-21.429 dB	
Ch1 Tr3 S32 1	5.1500000 GHz	-0.5076 dB	
Ch1 Tr3 S32 2	5.8500000 GHz	-0.4459 dB	
Ch1 Tr3 S32 3	2.4000000 GHz	-48.388 dB	
Ch1 Tr3 S32 4	2.5000000 GHz	-39.306 dB	
Ch1 Tr3 S32 5	10.3000000 GHz	-34.814 dB	
Ch1 Tr3 S32 6	11.7000000 GHz	-29.757 dB	
Ch1 Tr3 S32 7	15.4500000 GHz	-41.467 dB	
Ch1 Tr3 S32 8	16.2000000 GHz	-31.765 dB	
Ch1 Tr4 S13 1	2.4000000 GHz	-54.481 dB	
Ch1 Tr4 S13 2	2.5000000 GHz	-41.548 dB	
Ch1 Tr4 S13 3	4.9000000 GHz	-49.819 dB	
Ch1 Tr4 S13 4	5.9500000 GHz	-39.977 dB	

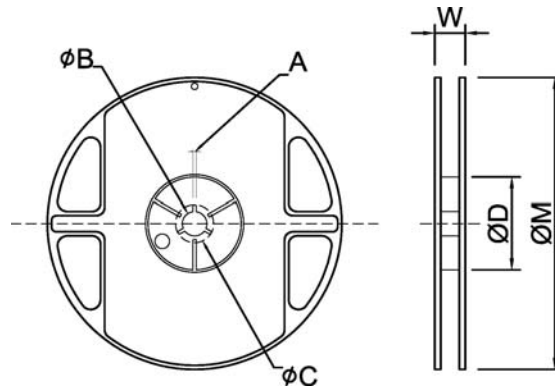
- Measured on Agilent E5071C Network Analyzer
- Common port : Port 2 (Return loss : S22)
- Low band port : Port 1 (Low band Insertion loss S21, and attenuation at high band)
- High band port : Port 3 (High band Insertion loss S32, and attenuation at low band)

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Taping Specifications

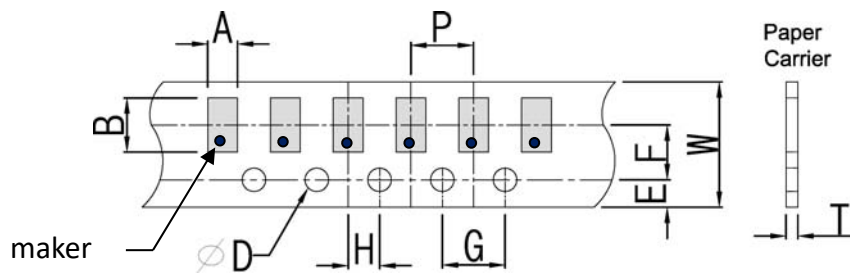
Reel and Taping Specification

Reel Specification



TYPE	SIZE		A	ψB	ψC	ψD	W	ψM
1608	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

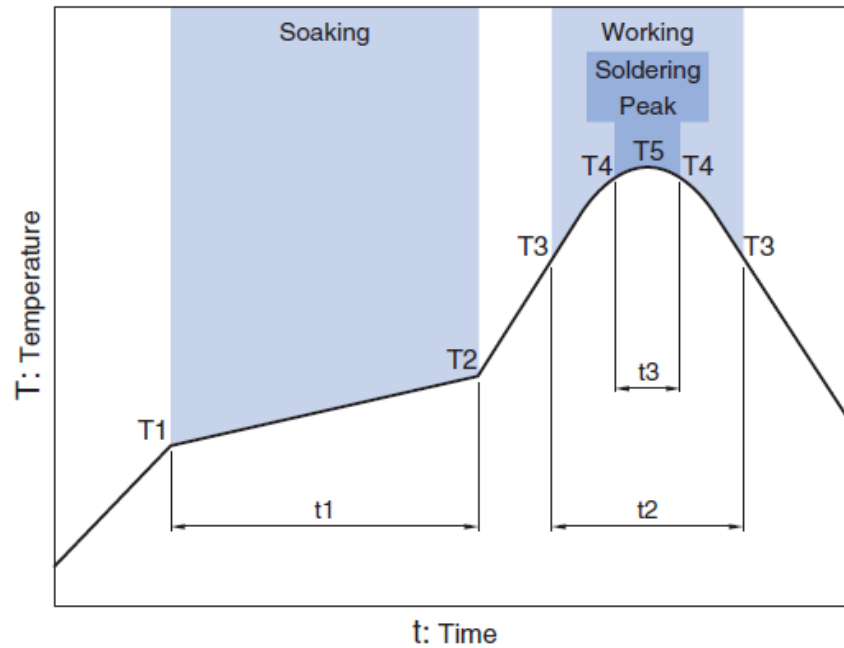


Packaging	Type	A	B	W	E	F	G	H	T	ψD	P
Paper Type	1608	1.40 ± 0.20	2.20 ± 0.20	8.0 ± 0.20	1.75 ± 0.10	3.0 ± 0.05	4.0 ± 0.10	2.0 ± 0.05	0.75 ± 0.10	$1.50^{+0.10}_{-0}$	4.0 ± 0.1

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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.

Revision History

Version	Date	Description
Ver.01	Jul.2023	New issue.