Multilayer Diplexer

For 1550-1610MHz / 2400-6000MHz

MDPX24601516D21

2 x 1.25mm [EIA 0805]

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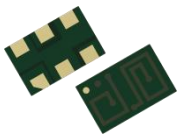
APPLICATIONS



1, Low Insertion Loss
2, Small size in 0805
3, Excellent high-power capacity up to 2W
4, RoHS compliance (Pb-Free)
5, AEC-Q200 qualified

DESCRIPTION

Megsine' MDPX24601516D21 is a MiPD diplexer with a low passband from 1550 to 1610 MHz and a high passband from 2400 to 6000 MHz, optimized for diplexing low band and high band signals. The MDPX24601516D21 is ideal for low insertion loss and wide band application. It is suitable used in smart phone, 5G module and other IOT modules. It is constructed from organic material which possess excellent electrical and mechanical stability. All components are 100% RF tested.

MAXIMUM RATINGS

Characteristic	Ratings	Units
RF Power (in BW)	33	dBm
Operating Temperature Range	-40~+105	℃
Storage Temperature Range	-40~+125	℃
Moisture Sensitivity Levels	3	MSL
ESD Level Human Body Model	8000	V

ELECTRICAL CHARACTERISTICS

Low-Band

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	1550 to 1610	-	0.85	1
Return Loss (dB)	1550 to 1610	10	16	-
Attenuation (dB)	2400 to 2500	14	23	-
	4900 to 6000	15	21	-
Characteristics Impedance (Ω)			50 (Nominal)	

- Ta: +25±5°C

High-Band

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	2400 to 2500	-	0.85	1.45
	4900 to 6000		0.75	1.25
Return Loss (dB)	2400 to 2500	10	15	-
	4900 to 6000	10	20	
Attenuation (dB)	1550 to 1610	12	18	-
Characteristics Impedance (Ω)			50 (Nominal)	

- Ta: +25±5°C

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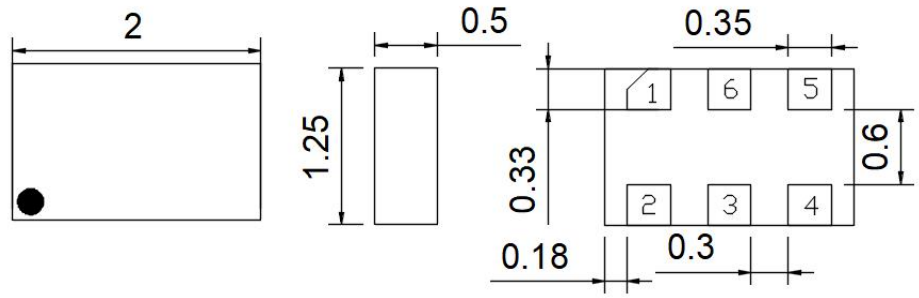
Common

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Isolation (dB)	1550 to 1610	12	18	-
	2400 to 2500	14	25	-
	4900 to 6000	15	22	
Characteristics Impedance (Ω)			50 (Nominal)	

- Ta: +25±5°C

SHAPES AND DIMENSIONS

Top View Side View Bottom View

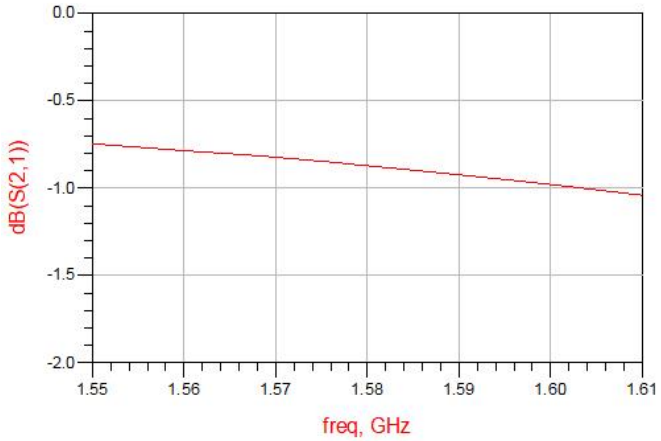


Terminal Functions	
1	GND
2	High-frequency
3	GND
4	Low-frequency
5	GND
6	Common

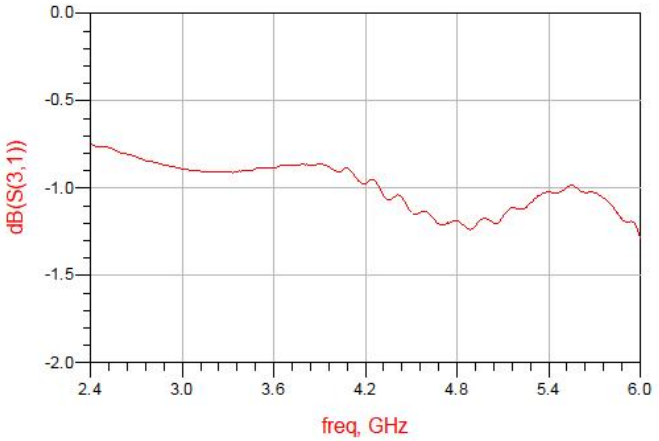
Unit: mm Tolerance:±0.1

FREQUENCY CHARACTERISTICS

Low-Band Insertion Loss



High-Band Insertion Loss



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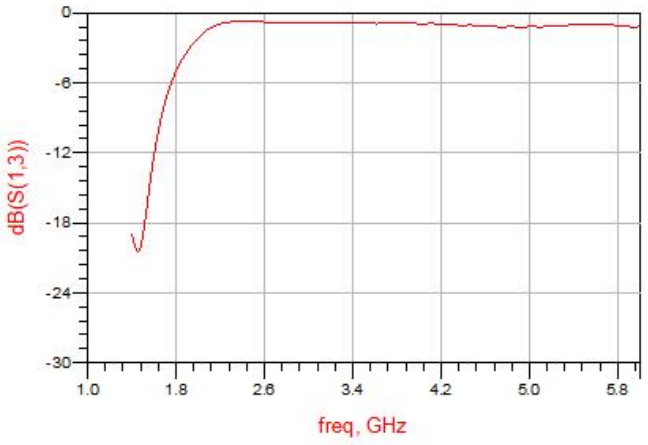
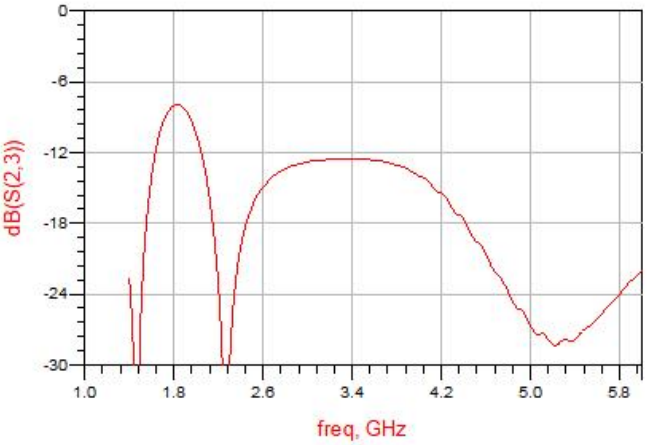
Low-Band Attenuation

High-Band Attenuation

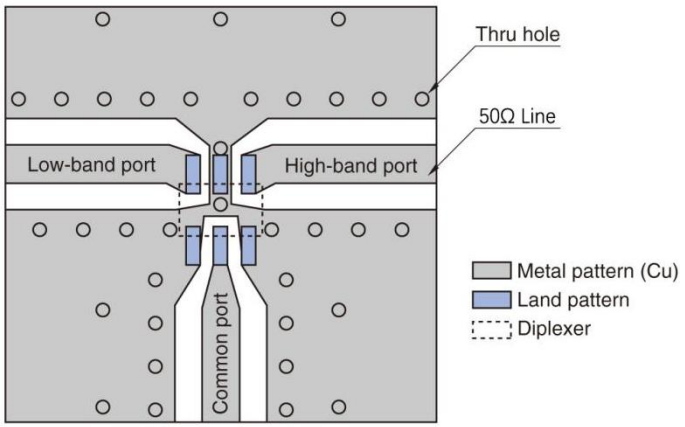


Common Return Loss

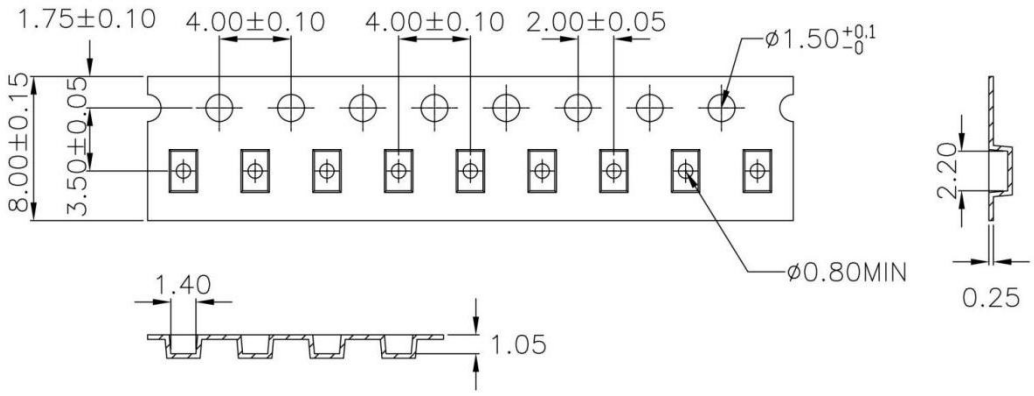
Common Isolation



RECOMMENDED LAND PATTERN AND EVALUATION BOARD



PACKAGING AND ORDERING INFORMATION



Device	Package	Reel	Shipping
MDPX24601516D21	2*1.25mm	7''	3000 Reel

Revison	Description	Date
Rev0	Preliminary	2026/07/20