

客户 CUSTOMER:

日期 DATE:

纳入仕様书 SPECIFICATION

产品名称 PRODUCT NAME: Diplexer

贵司料号 YOUR PART NO.:

敝司料号 OUR PART NO.: MDPX18M2461P69-D41E

版本号 VERSION.: V1.1

接受 RECEPTION

THE SPECIFICATION HAS BEEN ACCEPTED.

该纳入仕様书已被我司接受

日期:
DATE:

公司:
COMPANY:

批准
CFMD

审核
CHKD

接收
RCVD

本纳入仕様书共 10 页

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纳入仕様书改定履历 MODIFY HISTORY OF SPECIFICATION

Ver.	DATE	CONTENT	APPROVED
1.0	2020.06.16	初稿 Constitute	梁启新
1.1	2020.08.27	更新规格 Modify Electrical Characteristics	付迎华

目录 CATALOG

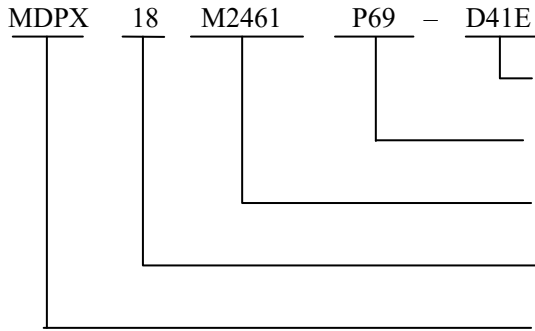
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1 适用范围 Scope

麦捷 Diplexer (MDPX 系列) 产品设计用于 5G、LTE、WIFI、Bluetooth、PDA 和无绳电话机中, 具有低的插入损耗、高的衰减和小体积 SMD 片式设计, 能减少复杂的调校工作, 可以简化电路设计。

“Microgate” Microwave Diplexer series are designed to be used in 5G、LTE、WIFI、Bluetooth、PDA & Cordless phones with low insertion loss and high attenuation as well as small size SMD chip design, which can simplify your complex tuning and circuit design.

2 品名构成 Product Identification



标准规格, 编号 D41E/Norma Type: D41E

平面结构/Plane Design Series: P69

模块/ Module: 2450MHz/6140MHz

产品尺寸/Chip Size: 1.6mm×0.8mm

多层结构双工器 / Multilayer Diplexer

3 形状、尺寸和材料 Appearance, Dimensions and Material

Unit:mm			
<p>[Top View]</p>	<p>[Bottom View]</p>		
	<p>Land Pattern</p>		
Terminal Configuration			
①	GND	④	Low band
②	Common port	⑤	GND
③	GND	⑥	High band

Symbols	L	W	T	a	b	c	g	p
Dimensions	1.6±0.1	0.8±0.1	0.70 Max.	0.25±0.1	0.175±0.10	0.15±0.1	0.25±0.1	0.5±0.1

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Part Name 名称	Structure and Material 结构及材料
Resonator 谐振体	Dielectric Material LTCC 介质材料
In/Output Terminals 输入/输出	Ag 银\Ni 镍\Sn 锡
Ground Base 接地面	Ag 银\Ni 镍\Sn 锡

4 测试条件 Testing Conditions

除非另有规定，否则在以下条件下测试 <Unless otherwise specified>

温度 Temperature : Ordinary Temperature (-40 to +105°C)

湿度 Humidity : Ordinary Humidity (25 to 85% RH)

大气压强 Atmospheric Pressure : 86 to 106 kPa

5 电气性能 Electrical Characteristics

操作温度范围 Operating Temperature Range : -40 to +105°C

保存温度范围 Storage Temperature Range : -55 to +125°C

规格参数 Parameters	单位 Unit	规格		
		下限值 Min	典型值 Typ	上限值 Max
★LowBand 中心频率 LOWBAND-Center frequency	MHz	/	2450	/
★LowBand 通带宽度 LOWBAND-Bandwidth	MHz	/	100	/
★LowBand 插入损耗 LOWBAND-Insertion Loss	dB	/	/	0.5
★LowBand 带外抑制度 LOWBAND-Rejection @ 4800~5000MHz	dB	25	/	/
★LowBand 带外抑制度 LOWBAND-Rejection @ 5150~7125MHz	dB	25	/	/
★LowBand 带外抑制度 LOWBAND-Rejection @ 7200~7500MHz	dB	25	/	/
★LowBand 端口驻波 (LowBand&Common Port@LowBand) LOWBAND-Port SWR		/	1.5	2.0
★HighBand 中心频率 HIGHBAND-Center frequency	MHz	/	6140	/
★HighBand 通带宽度 HIGHBAND-Bandwidth	MHz	/	1980	/

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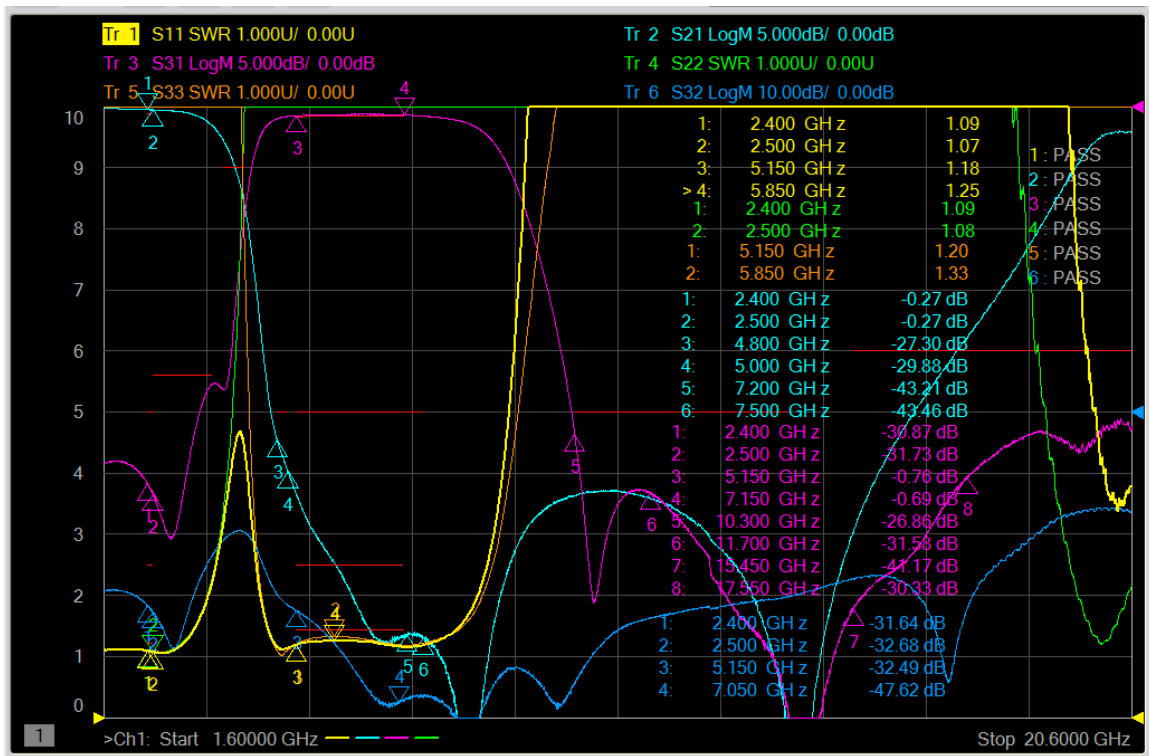
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★HighBand 插入损耗 HIGHBAND-Insertion Loss	dB@5150-5330MHz	dB	/	/	0.9
	dB@5330-7130MHz	dB			0.8
★HighBand 带内幅度波动 HIGHBAND-Amplitude Ripple		dB	/	/	/
★HighBand 带外抑制度 HIGHBAND-Rejection @2400~2500MHz		dB	25	/	/
★HighBand 带外抑制度 HIGHBAND-Rejection @2515~3600MHz		dB	22	/	/
★HighBand 带外抑制度 HIGHBAND-Rejection @3800~4200MHz		dB	5		
★HighBand 带外抑制度 HIGHBAND-Rejection @10300~14250MHz		dB	25	/	/
★HighBand 带外抑制度 HIGHBAND-Rejection @15450~21375MHz		dB	20	/	/
★HighBand 端口驻波 (HighBand&Common Port@HighBand) HIGHBAND-Port SWR			/	1.5	2.0
LowBand 端口与 HighBand 端口相互抑制度 LOWBAND-HIGHBAND-Rejection @2400~2500MHz		dB	25	/	/
LowBand 端口与 HighBand 端口相互抑制度 LOWBAND-HIGHBAND-Rejection @5150~7125MHz		dB	25	/	/
LowBand 端输入阻抗 LOWBAND-Input Impedance		ohm	50		
HighBand 端输出阻抗 HIGHBAND-Output Impedance		ohm	50		
Common 端阻抗 Ant Impedance		ohm	50		
功率容量 Power Capacity		W	2.0 Max		

6 特性曲线 Characteristics Curve



7 焊接条件 Recommended Soldering Conditions

1、焊剂 Flux, Solder

① 使用松香助焊剂，禁止使用卤化物含量超过 0.2wt% 的强酸性助焊剂。

Use rosin-based flux. Don't use highly acidic flux with halide content exceeding 0.2wt% (chlorine conversion value).

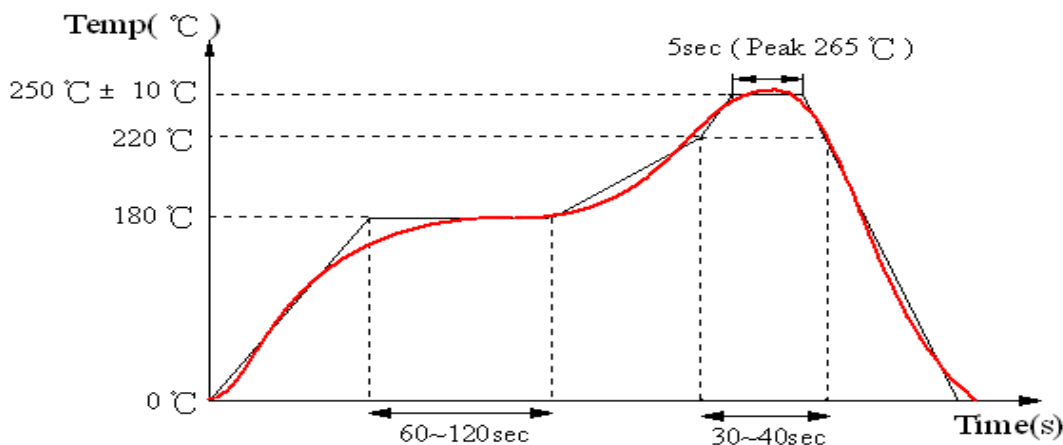
② 使用纯锡焊料 Use Sn solder.

2、回流焊条件 Reflow soldering conditions

● 预热时，产品表温与焊料温度的温差最大不允许超出 150℃，焊接完后冷却时，产品表温与溶剂温度之间的温差最大不允许超出 100℃。预热不足有可能引发产品表面裂纹，导致产品品质下降。

Pre-heating should be in such a way that the temperature difference between solder and product surface is limited to 150℃ max. Cooling into solvent after soldering also should be in such a way that temperature difference is limited to 100℃ max. Unwrought pre-heating may cause cracks on the product, resulting in the deterioration of products quality.

● 标准回流焊曲线 Standard soldering profile.



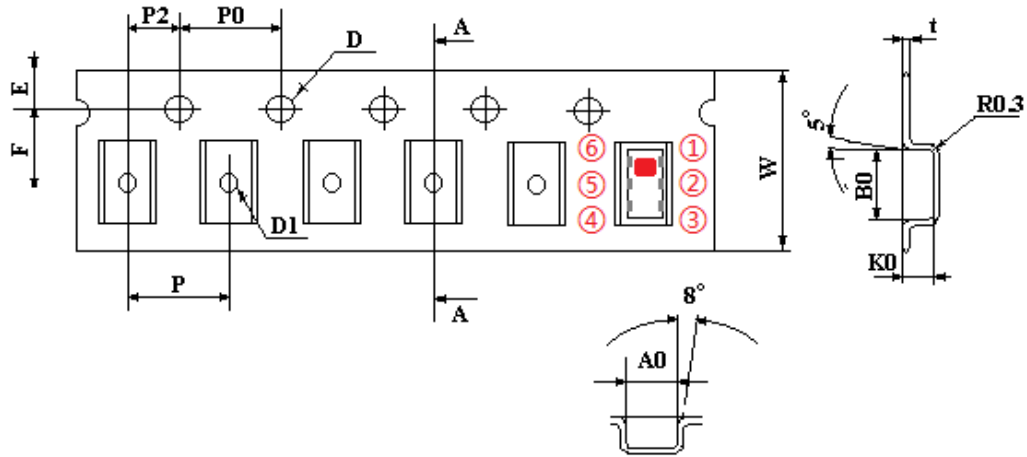
3、手工返工 Reworking with soldering iron

当使用电烙铁进行手工焊接时，以下条件必须严格遵守 The following conditions must be strictly followed when using a soldering iron.

预热 Pre-heating	150℃, 1 minute
尖端温度 Tip temperature	350℃ max
输出功率 Soldering iron output	80w max
电烙铁头尖端尺寸 End of soldering iron	φ3mm max
焊接时间 Soldering time	3 seconds max

8 包装 Packaging

①编带尺寸 Dimensions of Tape:

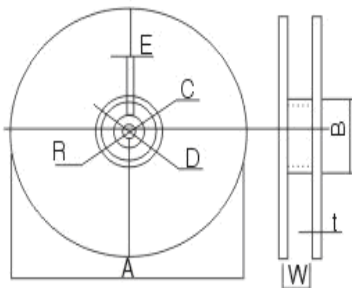


W	P	E	F	P2	D	D1
8.00+0.30/-0.10	4.00±0.10	1.75±0.10	3.50±0.05	2.00±0.05	1.50+0.10/-0.00	0.70+0.25/-0.10
P0	10P0	A0	B0	K0	T	Tape Material
4.00±0.10	40.00±0.20	0.95±0.10	1.82±0.10	0.75±0.10	0.22±0.05	塑带 plastic carrier tape

Unit: mm

②带轮尺寸 Dimensions of Reel

Unit: mm



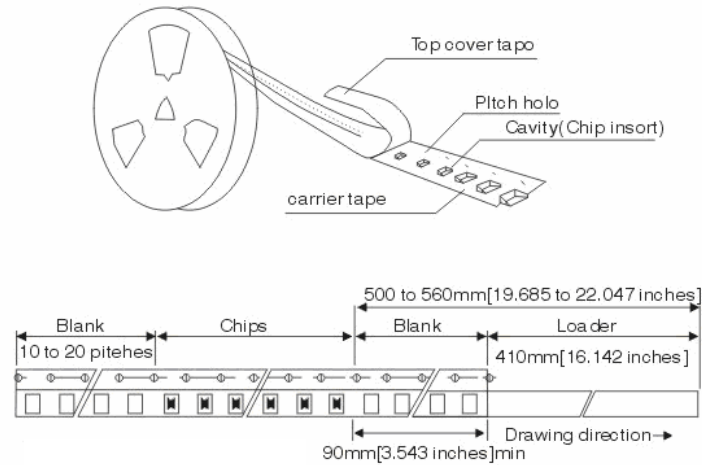
Reel material: PS (Polystyrene)

A	178±2
B	60±2
C	13.0±0.5
D	21.0±0.8
E	2.0±0.5
W	8.5±1.0
t	1.2±0.2
R	1.0±0.25

③编带抗拉强度 Pulling strength of tapes:

载带 Carrier tape	10N or more (1kgf or more)
上盖带 Cover tape	5N or more (1kgf or more)

④编带简图及拉伸方向 Taping figure and drawing direction:



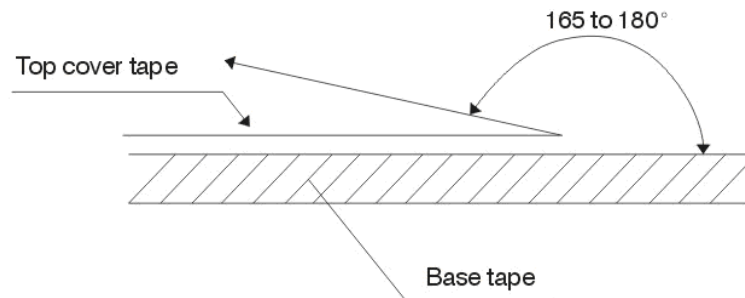
编带材料 Tape material:

基带 Base tape: 塑带 plastic carrier tape

盖带 Cover tape: 聚乙烯 polyethylene

⑤盖带的剥离强度 Peeling strength of cover tape:

盖带 Cover tape	0.2~0.6N (20gf~60gf)
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测试条件 Test condition:

- 1) 剥离角度 peel angle: 165°~180° vs. carrier tape.
- 2) 剥离速度 peel speed: 300mm/min±10%.

⑥包装数量 Packaging quantities: 4000 PCS / Reel