客户 CUSTOMER: 日期 DATE:

规格书
SPECIFICATION

产 品 名 称 PRODUCT NAME: 叠层片式双工器

Multilayer Chip Diplexer

贵 司 料 号 YOUR PART NO.:	
敝 司 料 号 OUR PART NO.:	MDPX18M0917P69-D05M
版 本 号 VERSION.:	V2.3

接受 RECEPTION THE SPECIFICATION HAS BEEN ACCEPTED. 该规格书已被我司接受 日期: DATE： 公司： COMPANY：		
批准 CFMD	审核 CHKD	接收 RCVD

本规格书共 9 页

MANUFACTURING NAME

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规格书改定履历 MODIFY HISTORY OF SPECIFICATION

Ver.	DATE	CONTENT	APPROVED
1.0	2020.05.24	初稿 Constitute	梁启新
1.1	2020.08.11	更新产品外形　Modify the Product Appearance	梁启新
1.2	2020.08.17	更新产品功率容量 Modify Power Capacity	付迎华
2.0	2020.10.15	更新电性参数及增加包装 Modify Electrical Characteristics and add Packaging	付迎华
2.1	2021.03.25	更新电性参数 Modify Electrical Characteristics	付迎华
2.2	2025.04.21	增加潮敏等级 Add the MSL	付迎华
2.3	2025.04.22	增加 DC~699MHz 通带插损 Add the IL@DC~699MHz	付迎华

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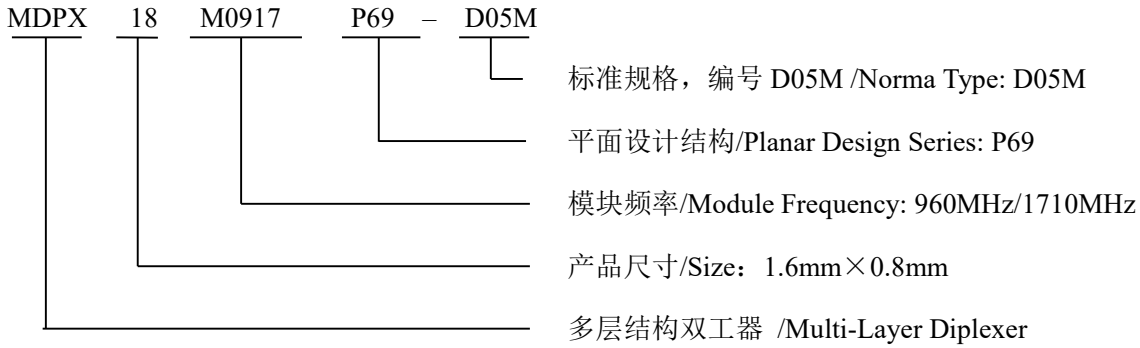
1 适用范围 Scope

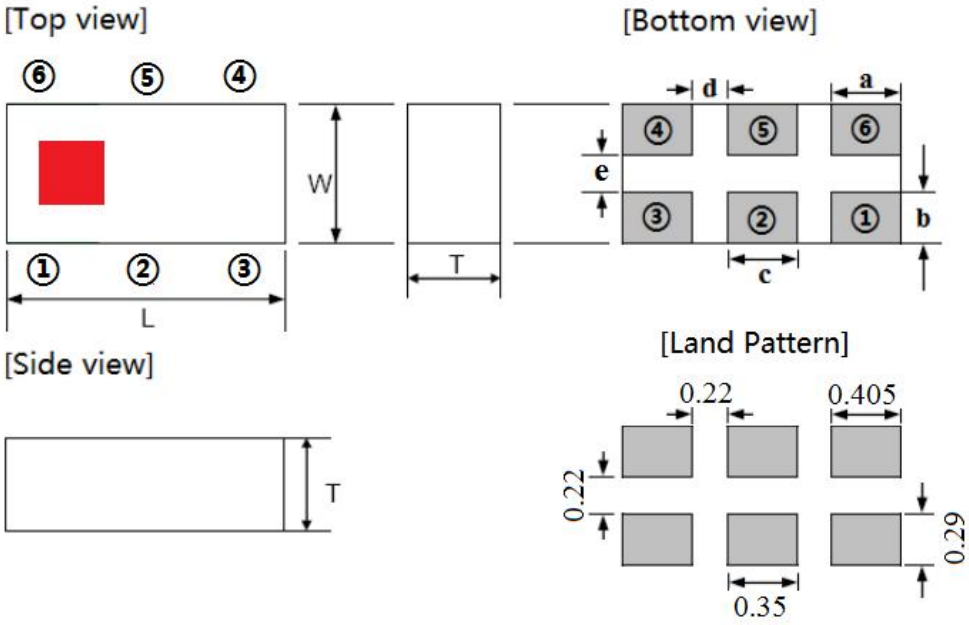
“麦捷”叠层片式双工器系列产品设计用于 5G、LTE、WIFI、Bluetooth、PDA 和无绳电话机等，具有低的插入损耗、高的隔离度和小体积 SMD 片式设计，能减少复杂的调校工作，可以简化电路设计。

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

2 品名构成 Product Identification



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



PIN Configuration

①	②	③	④	⑤	⑥
GND	Common Port	GND	Low Band Port	GND	High Band Port

Dimension: Unit:mm

L	W	T	a	b	c	d	e
1.6±0.15	0.8±0.15	0.7±0.1	0.405±0.1	0.29±0.1	0.35±0.1	0.22±0.1	0.22±0.1

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 +85℃)

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

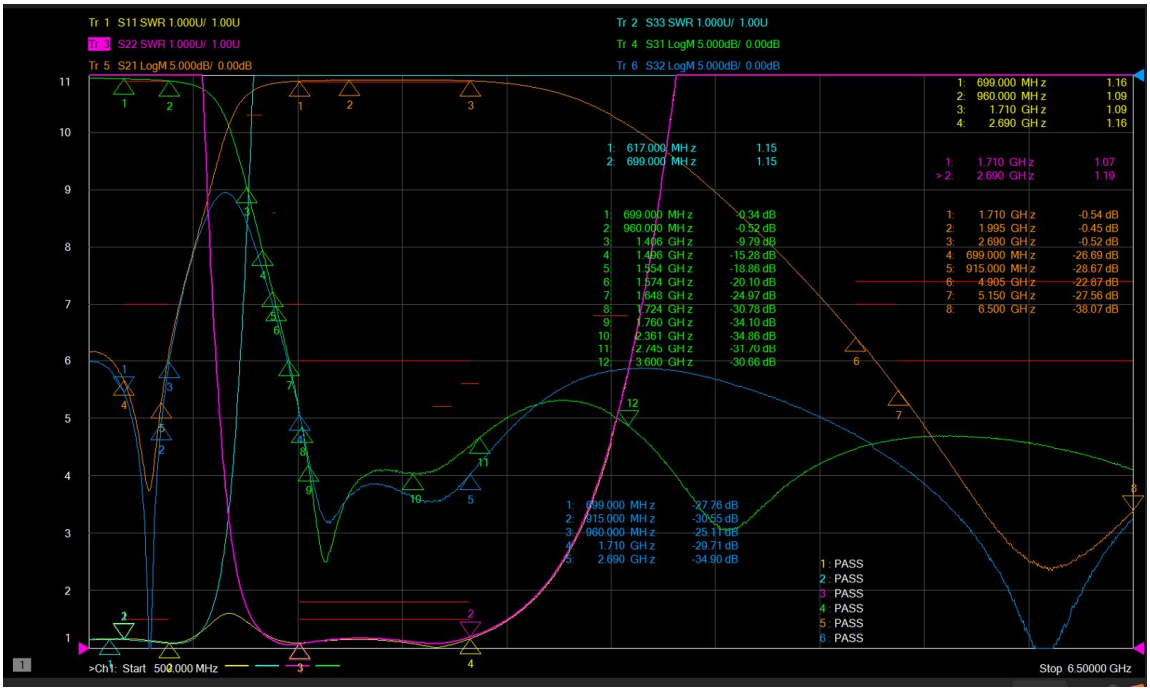
操作温度范围 Operating Temperature Range : -40 to +85℃

保存温度范围 Storage Temperature Range : -40 to +85℃

湿度敏感等级 Moisture Sensitivity levels: MSL1

No.	Item （项目）	Frequency （MHz）	Specifications （特性）			Notes(备注)
			Min.	Typ.	Max.	
5.1	Insertion Loss(dB) （in f1）插入衰耗	DC~699		0.34	0.45	+25℃
					0.55	-40℃~85℃
		699~960		0.52	0.65	+25℃
					0.75	-40℃~85℃
5.2	Insertion Loss(dB) （in f2）插入衰耗	1710~2690		0.54	0.65	+25℃
					0.75	-40℃~85℃
5.3	VSWR (in BW) 回波损耗（in f1 & f2）	699~960		1.16	1.5	
		1710~2690		1.20	1.5	
5.4	Attenuation(dB) 阻带衰耗 （in f1）	1406~1496	3.5	9.8		
		1554~1574	12	18.8		
		1648~1724	20	25.0		
		1760~1830	25	34.1		
		2109~2361	25	34.9		
		2472~2586	29	34.5		
		2640~2745	27	31.7		
		3400~3600	21	28.9		
		4905~6500	18	32.8		
5.5	Attenuation(dB) 阻带衰耗 （in f2）	699~915	20	26.7		
		4905~5150	20	22.9		
		5150~6500	20	31.5		
5.6	Isolation(dB) 隔离度	699~960	20	25.1		
		1710~2690	25	29.7		
5.7	In/Output Impedance 输入/输出阻抗		50 Ω			
5.8	Power Capacity 功率容量		4W Max.			

6 特性曲线 Characteristic 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起过 0.2wt%的强酸性助焊剂。

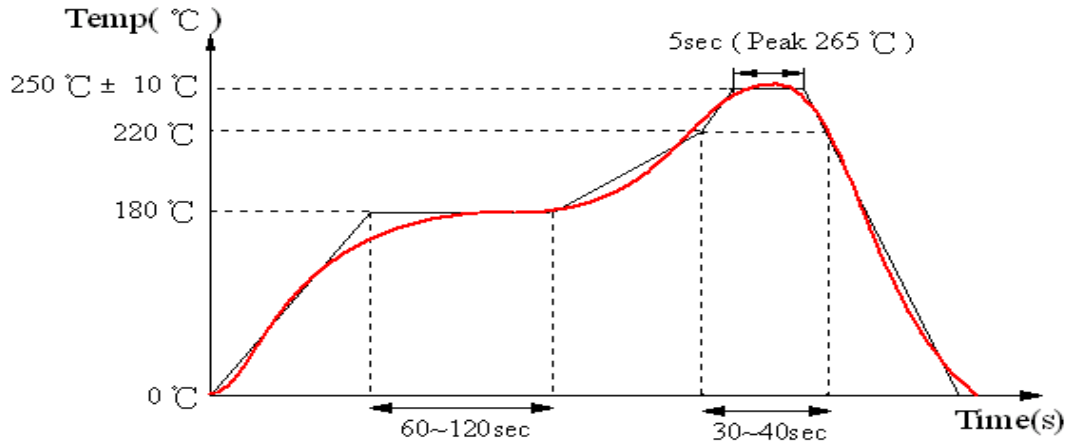
Use rosin-based flux. Don't use highly acidic flux with halide content exceeding 0.2wt% (chlorine conversion value).

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.



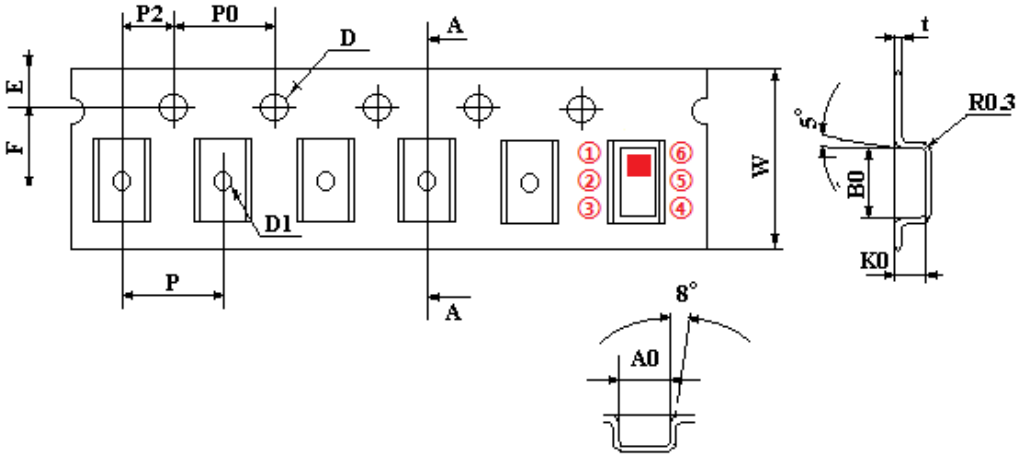
3、手工返工 Reworking with soldering iron

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	280℃ max
输出功率 Soldering iron output	30w 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

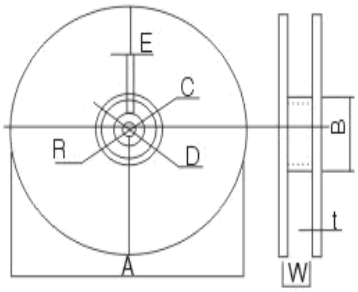
①编带尺寸 Dimensions of Tape:



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

②带轮尺寸 Dimensions of Reel

Unit: mm



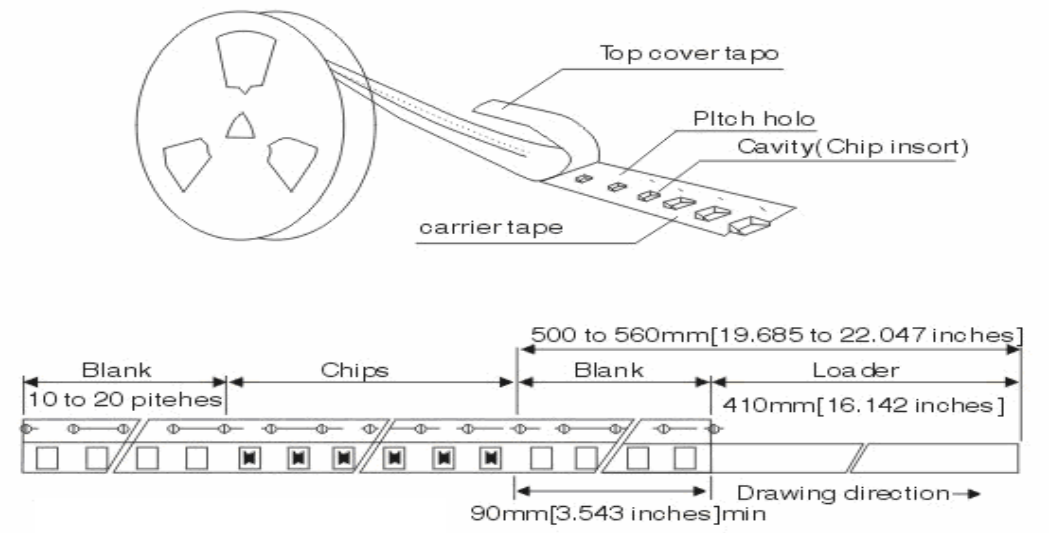
Reel material: PS (Polystyrene)

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:

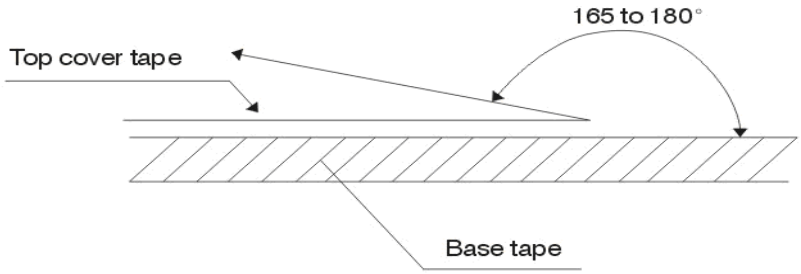
载带 Carrier tape	10N or more (1kgf or more)
上盖带 Cover tape	5N or more (1kgf or more)

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



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

盖带 Cover tape	0.2~0.6N (20gf~60gf)



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