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.:	MDPX18M2633P69-D68M
版 本 号 VERSION.:	V1.1

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

深圳市麦捷微电子科技有限公司
SHENZHEN MICROGATE TECHNOLOGY CO.，LTD
TEL：86-755-28085000
FAX：86-755-28085605

CFMD. 批准	CHKD. 审核	DSGD. 担当
梁启新	付迎华	曾艳峰

规格书改定履历 MODIFY HISTORY OF SPECIFICATION

Ver.	DATE	CONTENT	APPROVED
1.0	2023.10.12	初稿 Constitute	付迎华
1.1	2024.10.09	更新典型值和电性曲线 Update the Typical Value and Characteristic Curve	付迎华

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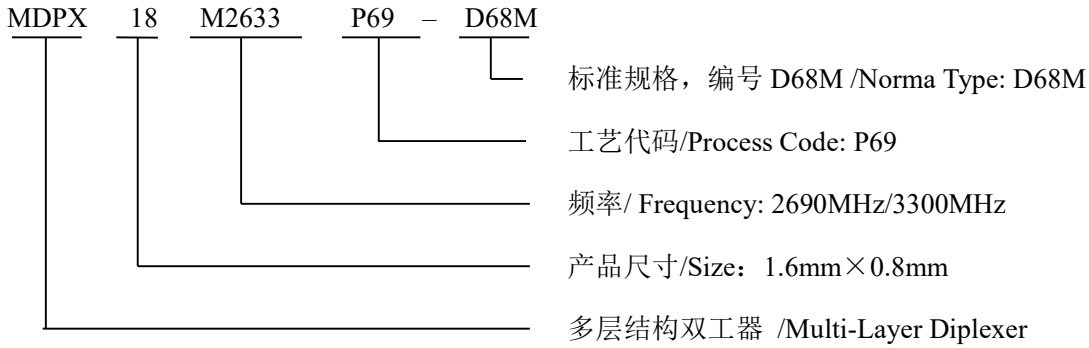
1 适用范围 Scope

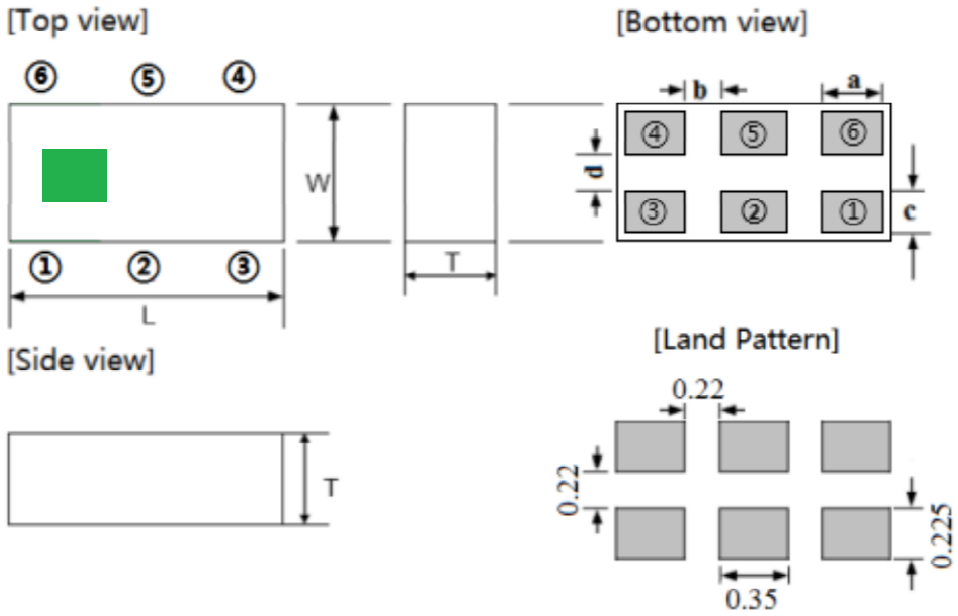
“麦捷”叠层片式双工器系列产品设计用于 5G、LTE、WIFI、Bluetooth、PDA 和无绳电话机等，具有低的插入损耗、高的隔离度和小体积 SMD 片式设计，能减少复杂的调校工作，可以简化电路设计。

“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	GND	Low Band	GND	High Band

Dimension: Unit:mm

L	W	T	a	b	c	d
1.6±0.10	0.8±0.10	0.60±0.1	0.35±0.05	0.22±0.05	0.225±0.05	0.22±0.05

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℃

Low Band

No.	Item （项目）	Frequency	Specifications （特性）		
			Min.	Typ.	Max.
5.1	Insertion Loss （dB） 插入衰耗 @+25℃	698~960 MHz		0.10	0.28
		1427~1511 MHz		0.11	0.45
		1710~2170 MHz		0.21	0.55
		2300~2690 MHz		0.63	0.90
5.2	Insertion Loss （dB） 插入衰耗 @-40~+85℃	698~960 MHz			0.38
		1427~1511 MHz			0.55
		1710~2170 MHz			0.65
		2300~2690 MHz			1.10
5.3	V.S.W.R（ANT&LB） 驻波比	698~2690 MHz		1.40	2.0
5.4	Attenuation 阻带衰耗 （dB）	3300~3400 MHz	8	17.2	
		3400~3800 MHz	13	22.2	
		3800~4200 MHz	14	22.0	
		4400~5000 MHz	16	24.0	
		5150~5850 MHz	20	30.0	

High Band

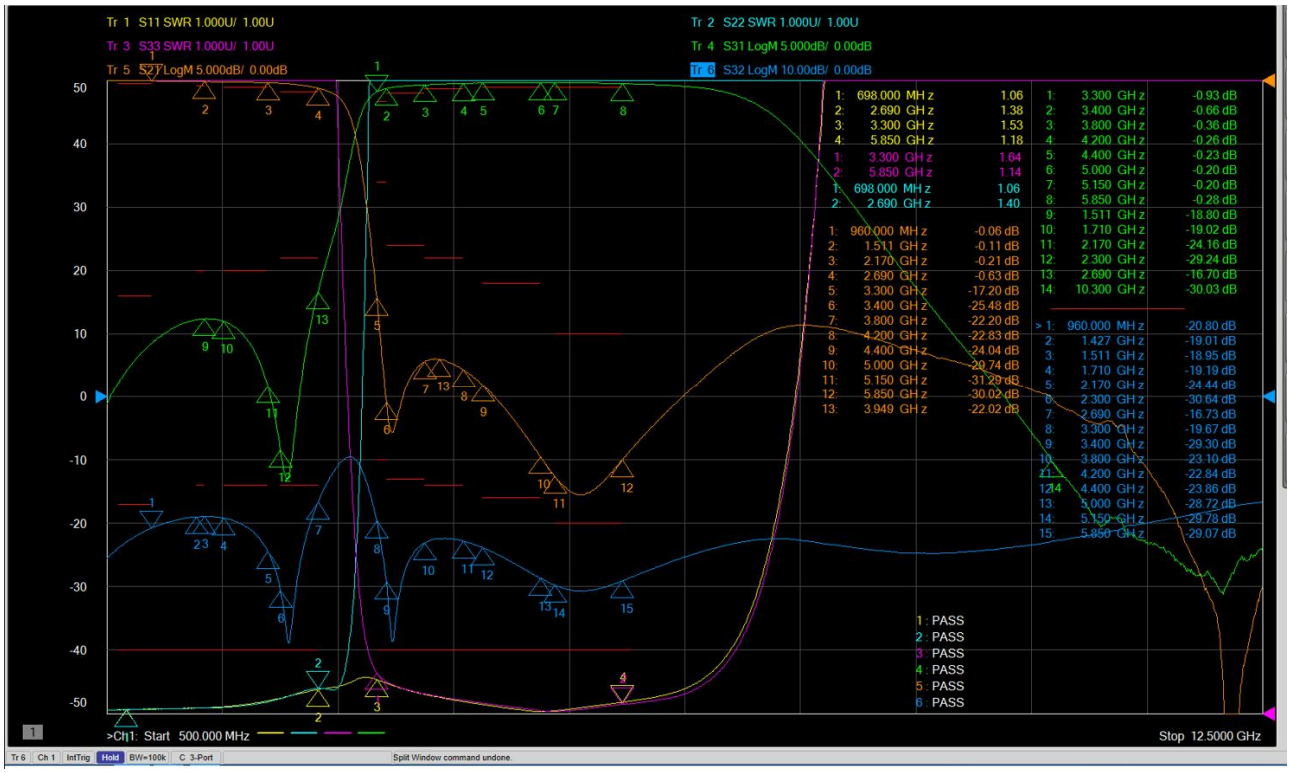
No.	Item （项目）	Frequency	Specifications （特性）		
			Min.	Typ.	Max.
5.5	Insertion Loss （dB） 插入衰耗 @+25℃	3300~3400 MHz		0.93	1.65
		3400~3800 MHz		0.66	1.00
		3800~4200 MHz		0.36	0.65
		4400~5000 MHz		0.23	0.54
		5150~5850 MHz		0.28	0.54
5.6	Insertion Loss （dB） 插入衰耗 @-40~+85℃	3300~3400 MHz			1.85
		3400~3800 MHz			1.20
		3800~4200 MHz			0.75
		4400~5000 MHz			0.64
		5150~5850 MHz			0.64

5.7	V.S.W.R (ANT&HB) 驻波比	3300~5850 MHz		1.53	2.0
5.8	Attenuation 阻带衰耗 （dB）	698~960MHz	17	20.8	
		1427~1511 MHz	15	18.8	
		1710~2170 MHz	15	19.0	
		2300~2690 MHz	14	16.7	
		10300~11700 MHz	18	30.0	

Isolation

No.	Item （项目）		Frequency	Specifications （特性）		
				Min.	Typ.	Max.
5.9	Isolation 隔离度 （dB）	Low Band to High Band	3300~3400 MHz	10	19.7	
			3400~3800 MHz	13	23.1	
			3800~4200 MHz	14	22.8	
			4400~5000 MHz	16	23.8	
			5150~5850 MHz	20	29.0	
5.10		High Band to Low Band	698~960 MHz	17	20.8	
			1427~1511 MHz	14	18.9	
			1710~2170 MHz	14	19.2	
			2300~2690 MHz	14	16.7	
5.11	In/Output Impedance 输入/输出阻抗			50 Ω		
5.12	Power Capacity 功率容量			2.0 W 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).

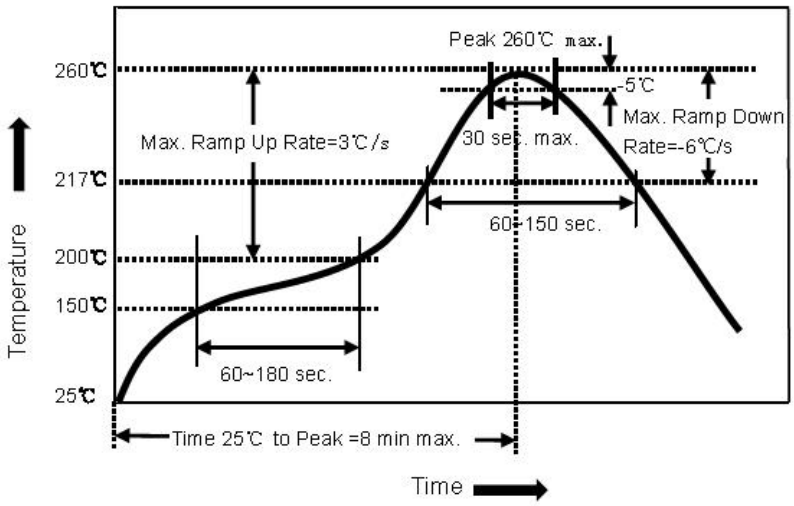
② 使用纯锡焊料 Use Sn solder.

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.



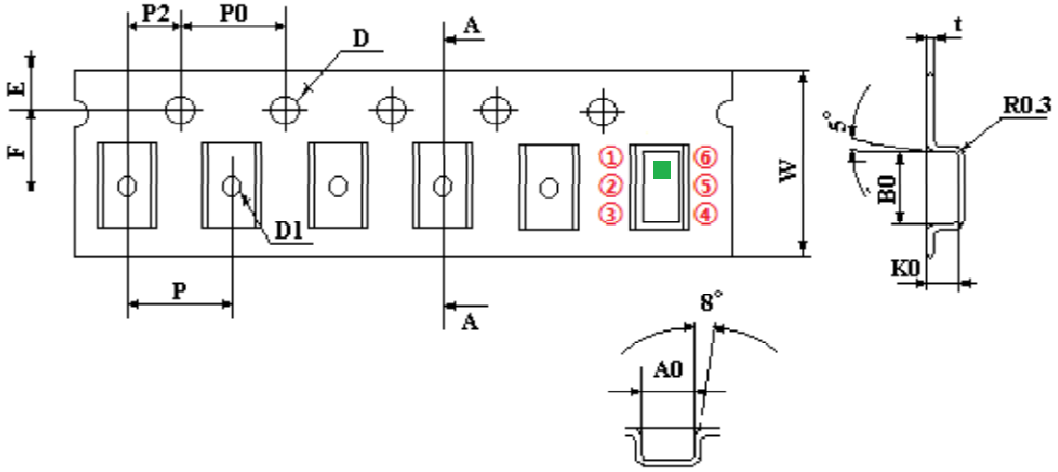
3、手工返工 Reworking with soldering iron

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

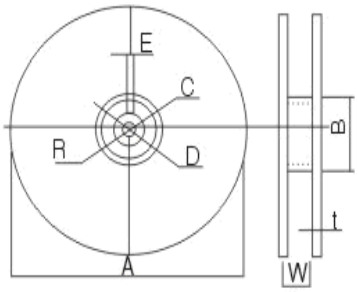
①编带尺寸 Dimensions of Tape:



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



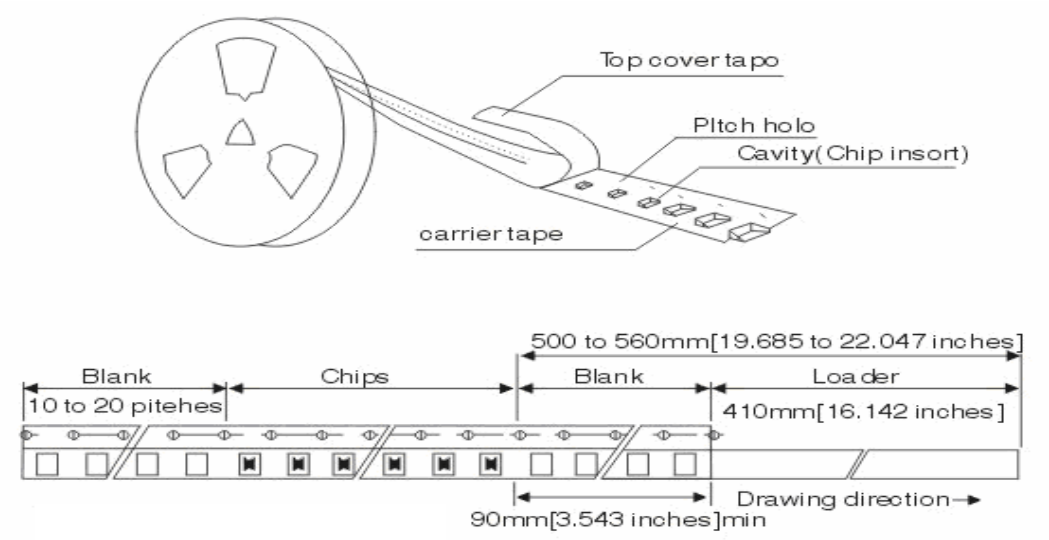
Reel material: PS (Polystyrene)

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:

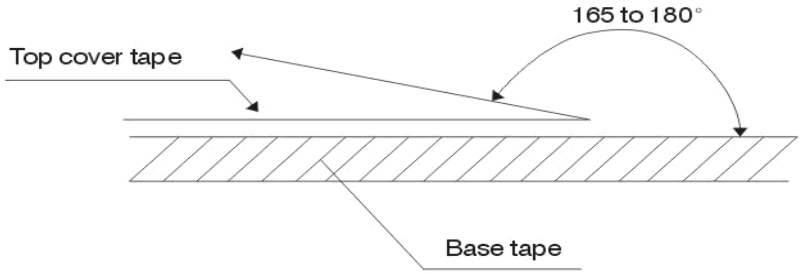
载带 Carrier tape	10N or more (1kgf or more)
上盖带 Cover tape	5N or more (1kgf or more)

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