

客户 CUSTOMER:

日期 DATE:

纳入仕様书
SPECIFICATION

Preliminary

产品名称 PRODUCT NAME: Diplexer

贵司料号 YOUR PART NO.:

敝司料号 OUR PART NO.: MDPX21M0914P69-D46S

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

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MANUFACTURING NAME

深圳市麦捷微电子科技股份有限公司

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

深圳市麦捷微电子科技股份有限公司

地址: 深圳市坪山新区坪山大道 6075 号龙田科技园二巷 6 号

电话(Tel): 0755-28085000

传真(Fax): 0755-28085605

邮编(Postcode): 518118

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

Ver.	DATE	CONTENT	APPROVED
1.0	2020.08.20	初稿 Constitute	梁启新
1.1	2021.01.13	更新功率容量 Modify the Power Capacity 2 W Max. → 3 W Max.	付迎华

目录 CATALOG

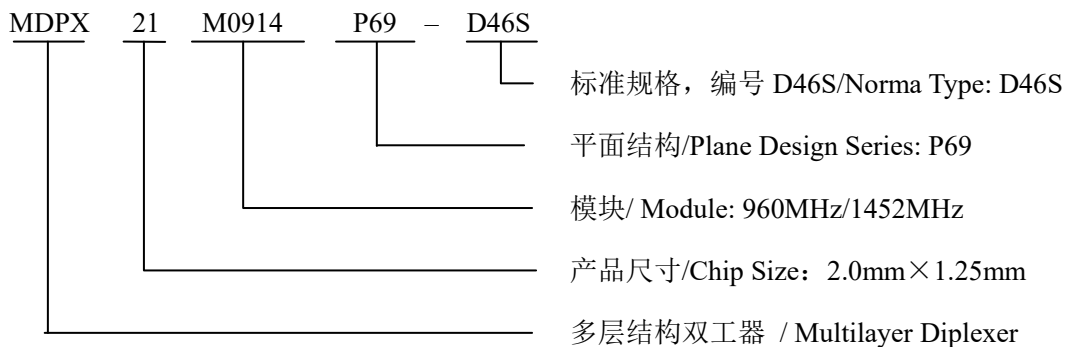
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1 适用范围 Scope

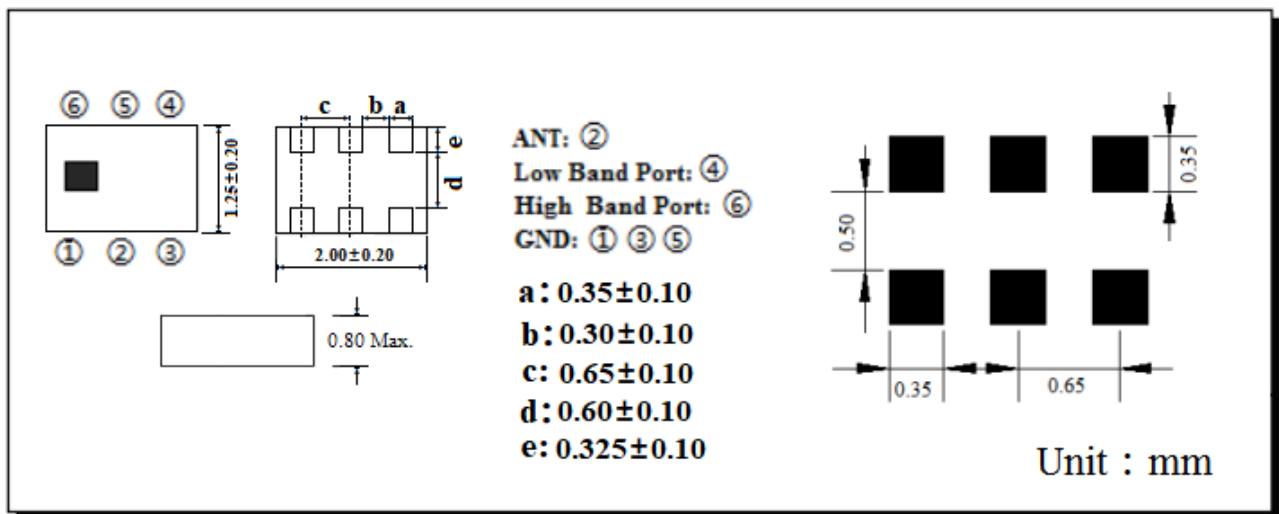
麦捷 Diplexer (MDPX 系列) 产品设计用于 5G、LTE、WIFI、Bluetooth、PDA 和无绳电话机中，具有低的插入损耗、高的衰减和小体积 SMD 片式设计，能减少复杂的调校工作，可以简化电路设计。

“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



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



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
Ground Base 接地面	Ag 银

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℃

功率容量 Power capacity : 3 W Max.

湿敏等级 Moisture sensitivity levels :MSL1

5.1 LB-ANT Spec requirement

Parameter		Symbol	Spec Requirement			
			Min.	Typ.	Max.	
Frequency range		MHz	617		960	
Max insertion loss	617~698 MHz	dB			0.60	
	699 ~ 758 MHz	dB			0.60	
	758 ~798 MHz	dB			0.55	
	798 ~960 MHz	dB			0.60	
Return Loss	617~ 960 MHz	dB	15			
Input port impedance		Ohm		50		
Output port impedance		Ohm		50		
Absolute attenuation	1554~1606 MHz	dB	20			
	1805 ~ 1880 MHz	dB	35			
	2110 ~ 2200 MHz	dB	35			
	2620 ~ 2690 MHz	dB	35			
	3400 ~ 3800 MHz	dB	35			
	5150 ~ 5925 MHz	dB	32			

5.2 MHB-ANT Spec requirement

Parameter		Symbol	Spec Requirement			Notes
			Min.	Typ.	Max.	
Frequency range		MHz	1452		2690	
Max insertion loss	1452~1496 MHz	dB			1.20	
	1710 ~ 2200 MHz	dB			0.60	
	2300 ~ 2690 MHz	dB			0.70	
Return Loss	1452~ 2690 MHz	dB	12			
Input port impedance		Ohm		50		
Output port impedance		Ohm		50		
Absolute attenuation	617~ 960 MHz	dB	22			
	3400~ 3800 MHz	dB	2			
	5150 ~ 5925 MHz	dB	22			

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电话(Tel): 0755-28085000

传真(Fax): 0755-28085605

邮编(Postcode): 518118

5.3 LB-MHB Spec requirement

Parameter		Symbol	Spec Requirement			Notes
			Min.	Typ.	Max.	
Minimum isolation	617 ~ 699 MHz	dB	20			
	699 ~ 960 MHz	dB	20			
	1710 ~ 2200 MHz	dB	30			
	2300 ~ 2690 MHz	dB	38			
	3400 ~ 3800MHz	dB	30			
	5150 ~ 5925MHz	dB	25			

6 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).

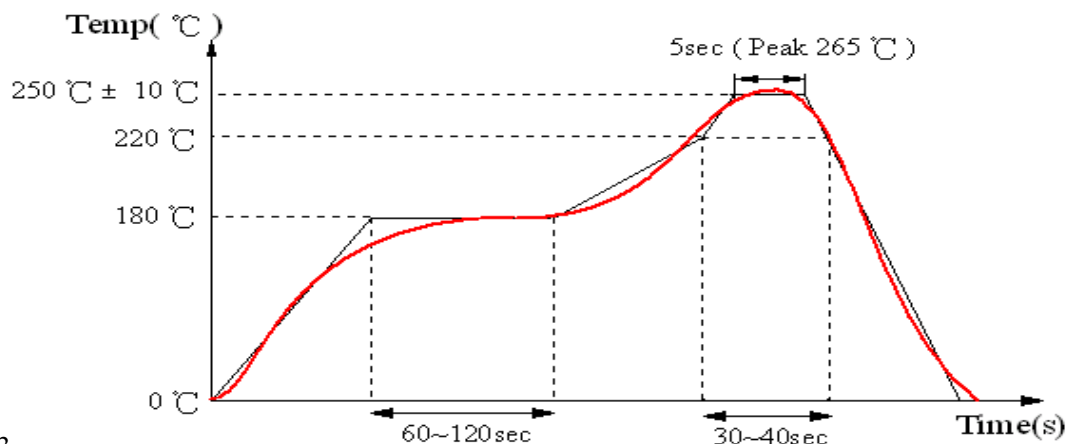
② 使用纯锡焊料 Use Sn solder.

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.



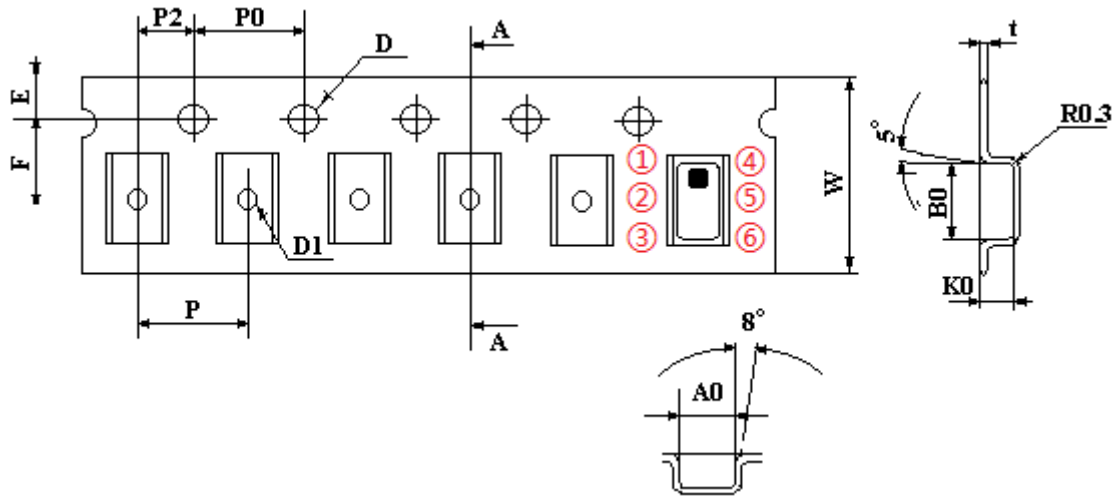
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当使用电烙铁进行手工焊接时，以下条件必须严格遵守 The following conditions must be strictly followed when using a soldering iron.

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

7 包装 Packaging

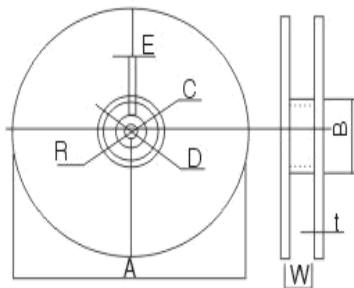
① 编带尺寸 Dimensions of Tape:



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	1.00+0.25/-0.10
P0	10P0	A0	B0	K0	t	Tape Material
4.00±0.10	40.00±0.20	1.45±0.10	2.35±0.10	1.15±0.10	0.22±0.05	塑带 plastic carrier tape

② 带轮尺寸 Dimensions of Reel

Unit: mm



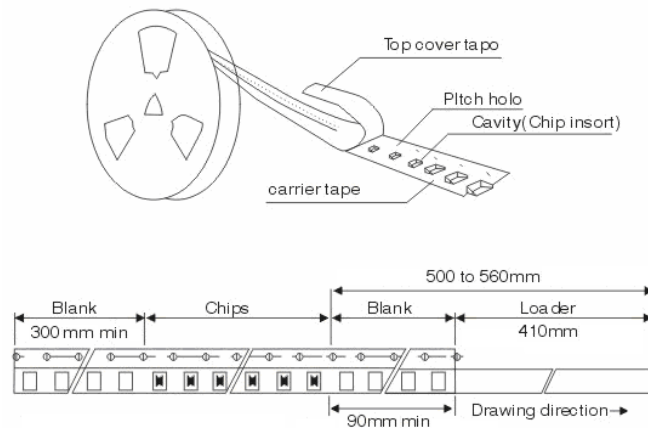
Reel material: PS (Polystyrene)

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:

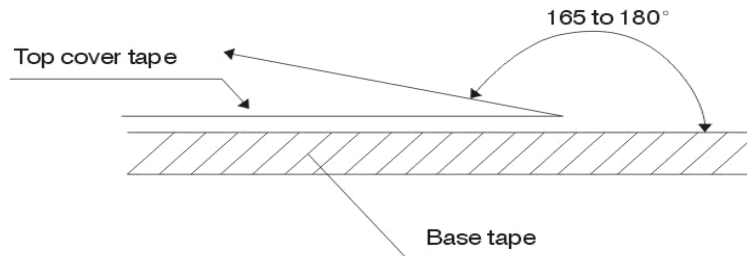
载带 Carrier tape	10N or more (1kgf or more)
上盖带 Cover tape	5N or more (1kgf or more)

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)
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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: 3000 PCS / Reel