客户 CUSTOMER: 日期 DATE:

纳入仕样书 Preliminary
SPECIFICATION

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.: V1.0

接受 RECEPTION THE SPECIFICATION HAS BEEN ACCEPTED. 该纳入仕样书已被我司接受 日期: DATE： 公司： COMPANY：		
批准 CFMD	审核 CHKD	接收 RCVD

本纳入仕样书共 7 页

MANUFACTURING NAME

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

纳入仕样书改定履历 MODIFY HISTORY OF SPECIFICATION

NO.	DATE	CONTENT	APPROVED
1.0	2020.08.20	初稿 Constitute	梁启新

目录 CATALOG

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。

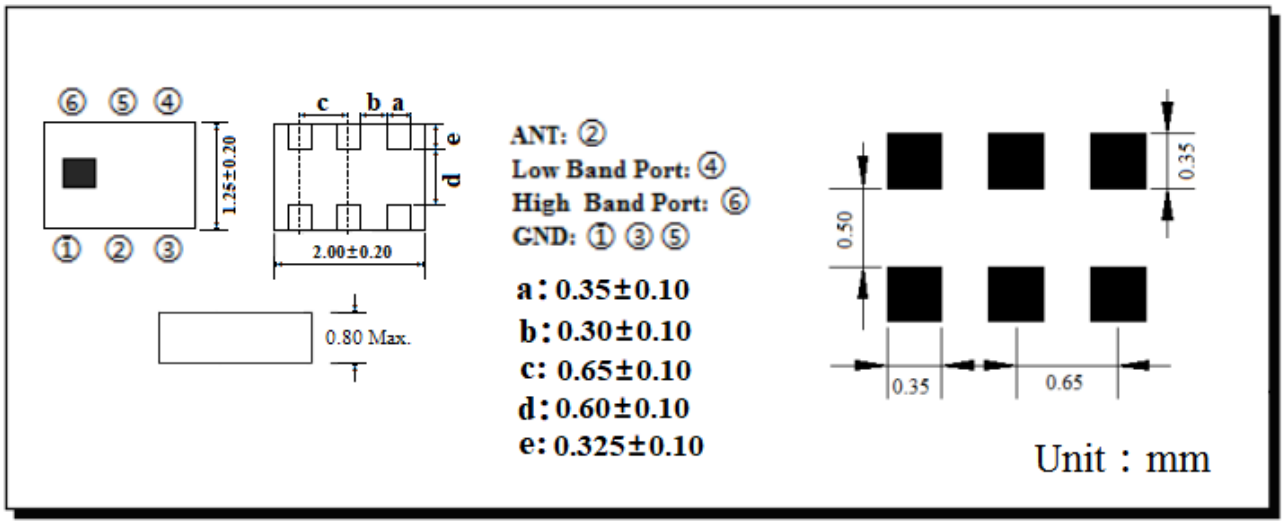
"Microgate" Microwave Diplexer series are designed to be used in 5G、LTE、WIFI、Bluetooth,、PDA & Cordless phones with low insertion loss and high attenuation as well as small size SMD chip design, which can simplify your complex tuning and circuit design.

2 品名构成 Product Identification

MDPX 21 M0914 P69 – D46S

- D46S：标准规格，编号 D46S/Norma Type: D46S
- P69：平面结构/Plane Design Series: P69
- M0914：模块/ Module: 960MHz/1452MHz
- 21：产品尺寸/Chip Size：2.0mm×1.25mm
- MDPX：多层结构双工器 / Multilayer Diplexer

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 : 2W 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			

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。

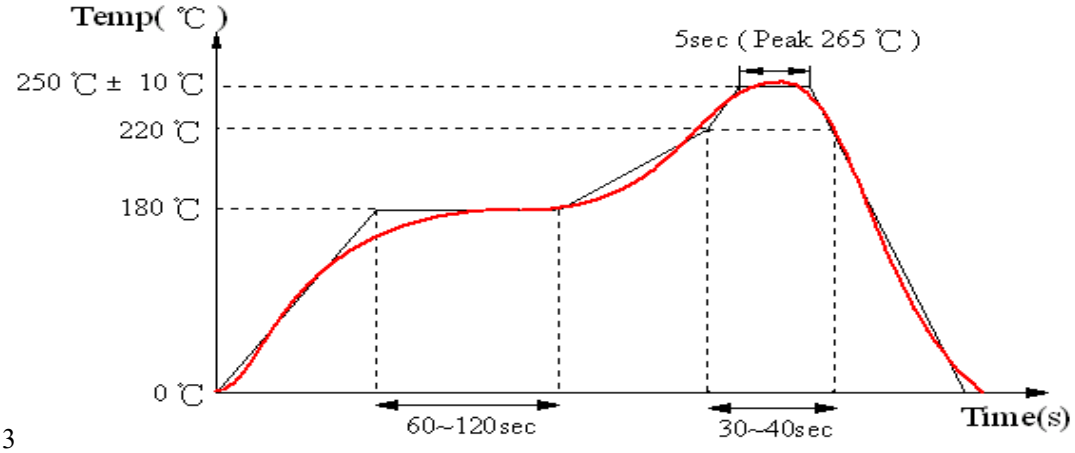
Use rosin-based flux. Don't use highly acidic flux with halide content exceeding 0.2wt% (chlorine conversion value).

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.



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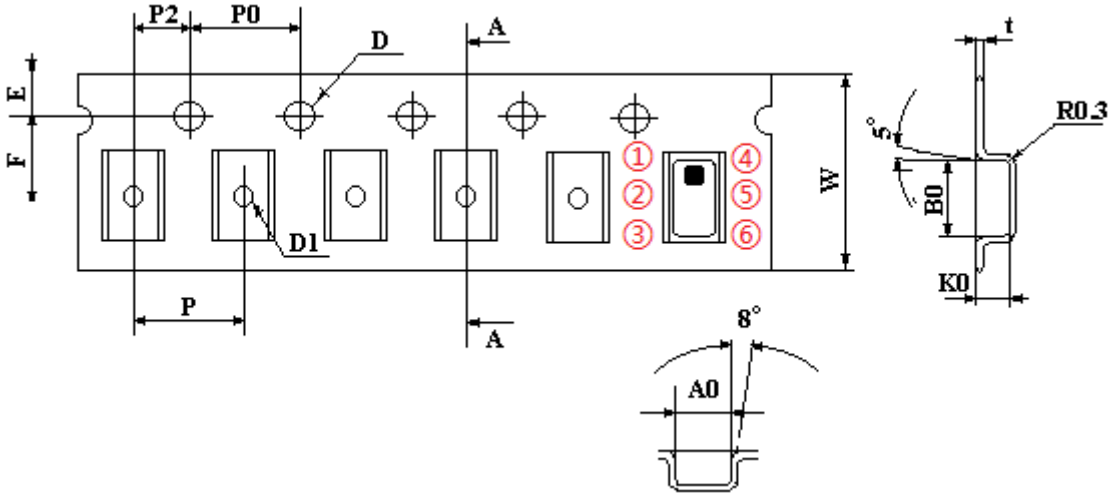
当使用电烙铁进行手工焊接时，以下条件必须严格遵守 The following conditions must be strictly followed when using a soldering iron.

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

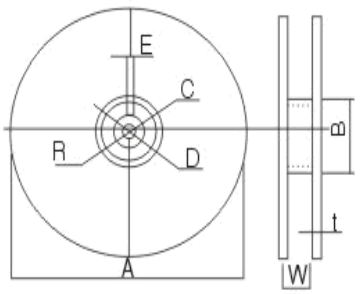
①编带尺寸 Dimensions of Tape:



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



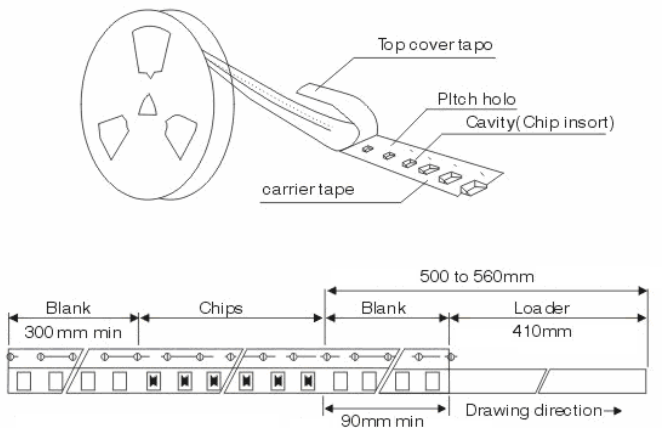
Reel material: PS (Polystyrene)

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:

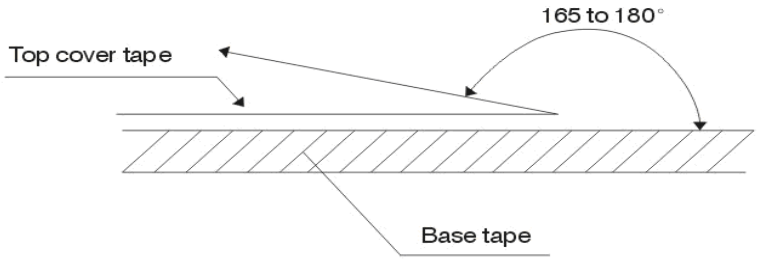
载带 Carrier tape	10N or more (1kgf or more)
上盖带 Cover tape	5N or more (1kgf or more)

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)



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