客户　CUSTOMER:　　　　　　　　　　　　　　日期　DATE:

纳入仕样书
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.: MDPX22M0917P69-D40

版 本 号 VERSION.: V1.1

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 9 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

Ver.	DATE	CONTENT	APPROVED
1.0	2019.11.13	初稿 Constitute	梁启新
1.1	2020.09.10	更新封装及电性参数 Modify Appearance and Characteristic curve	付迎华

目录 CATALOG

1 适用范围 Scope

麦捷 Diplexer（MDPX 系列）产品设计用于 PHS、WLAN、GSM、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 PHS、WLAN、GSM、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 22 M0917 P69 – D40

标准规格，编号 D40/Norma Type: D40

平面设计结构/Planar Design Series: P69

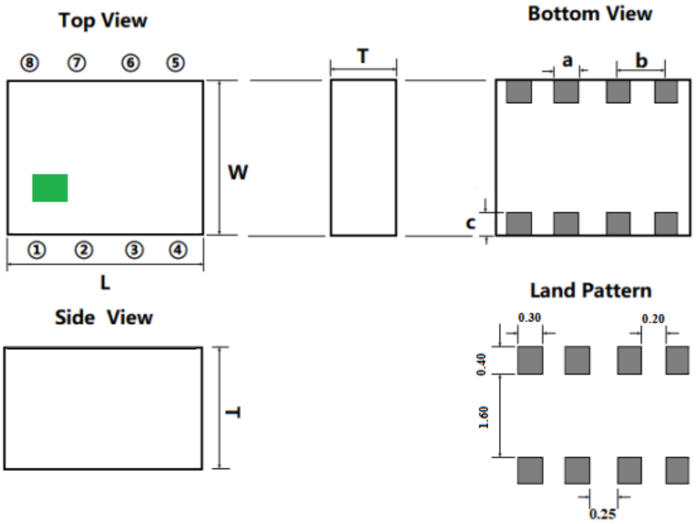
模块频率/Module Frequency: 960MHz/1710MHz

产品尺寸/Size：2.5mm×2.0mm

多层结构双工器 /Multi-layer Diplexer

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

Unit：mm



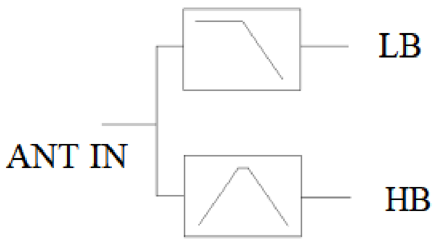
Dimensions(mm)

L	W	T	a	b	c
2.50±0.15	2.00±0.15	1.00 Max.	0.25±0.15	0.50±0.10	0.20±0.15

Pin Configuration

①	②	③	④	⑤	⑥	⑦	⑧
GND	GND	Common	GND	HB	GND	GND	LB

Circuit Diagram



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

当对测量结果有疑问时<In case of doubt>·
温度 Temperature : 20±2℃
湿度 Humidity : 60 to 75% 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

Parameter	Frequency Range（MHz）	Specifications（dB）
Insetion Loss（dB）	617~960	≤0. 4
Return Loss (dB) (Low Band Port)	617~960	≥18
Attenuation (dB)	1427~1463	≥9
	1463~1496	≥10
	1496~1511	≥10
	1554~1605	≥10
	1695~1710	≥25
	1710~1850	≥25
	1760~1850	≥25
	1850~2108	≥25
	2109~2200	≥25

	2300~2400	≥25
	2401~2496	≥25
	2496~2586	≥25
	2620~2745	≥25
	3400~3800	≥30
	5150~5950	≥30
	5926~12750	≥10

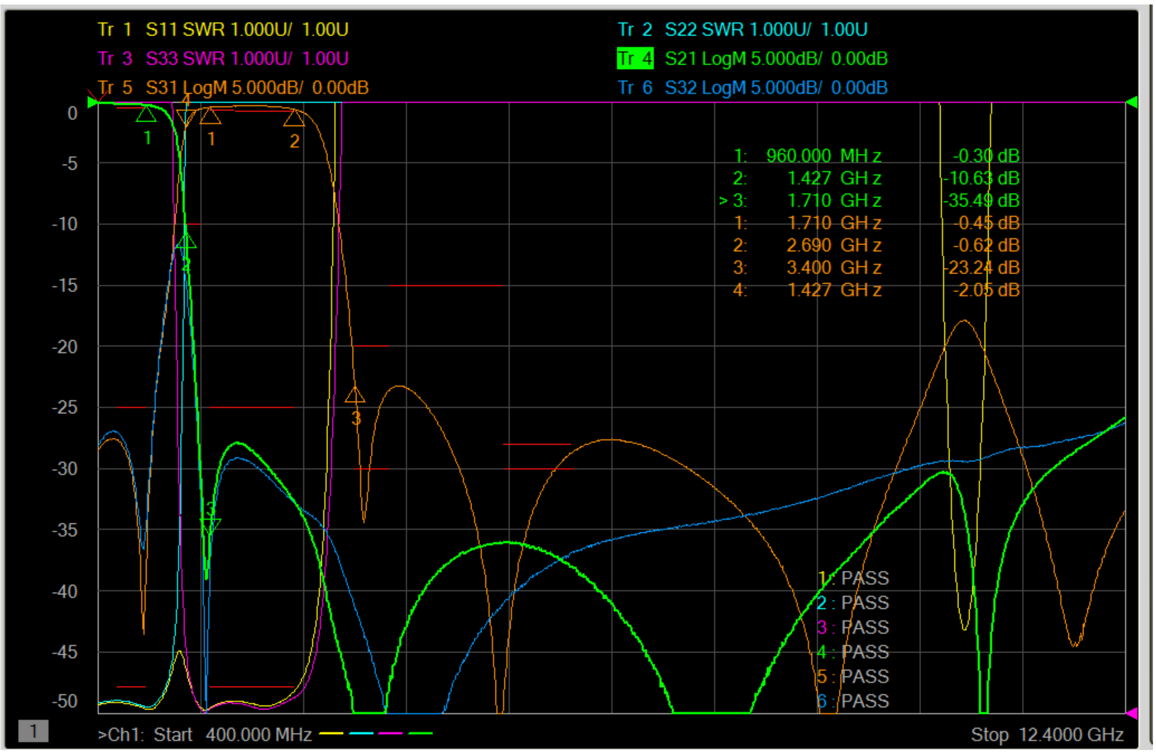
High Band

Parameter	Frequency Range（MHz）	Specifications（dB）
Insetion Loss（dB）	1710~1995	≤0. 7
	2010~2690	≤0. 8
Return Loss (dB) (High Band Port)	1710~1995	≥15
	2010~2690	
Attenuation (dB)	617~915	≥25
	915~960	≥25
	3400~3600	≥20
	3600~3800	≥20
	3800~5130	≥15
	5130~5925	≥28
	5925~12750	≥12

Common

Parameter	Frequency Range（MHz）	Specifications（dB）
Isolation (dB)	698~915	≥25
	915~960	≥24
	1710~2690	≥25
	2112~2148	≥25

6　特性曲线 Characteristic curve



Tr 1 S11 SWR 1.000U/ 1.00U
Tr 2 S22 SWR 1.000U/ 1.00U
Tr 3 S33 SWR 1.000U/ 1.00U
Tr 4 S21 LogM 5.000dB/ 0.00dB
Tr 5 S31 LogM 5.000dB/ 0.00dB
Tr 6 S32 LogM 5.000dB/ 0.00dB

1: 960.000 MHz -0.30 dB
2: 1.427 GHz -10.63 dB
> 3: 1.710 GHz -35.49 dB
1: 1.710 GHz -0.45 dB
2: 2.690 GHz -0.62 dB
3: 3.400 GHz -23.24 dB
4: 1.427 GHz -2.05 dB

1 : PASS
2 : PASS
3 : PASS
4 : PASS
5 : PASS
6 : PASS

>Ch1: Start 400.000 MHz
Stop 12.4000 GHz

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。

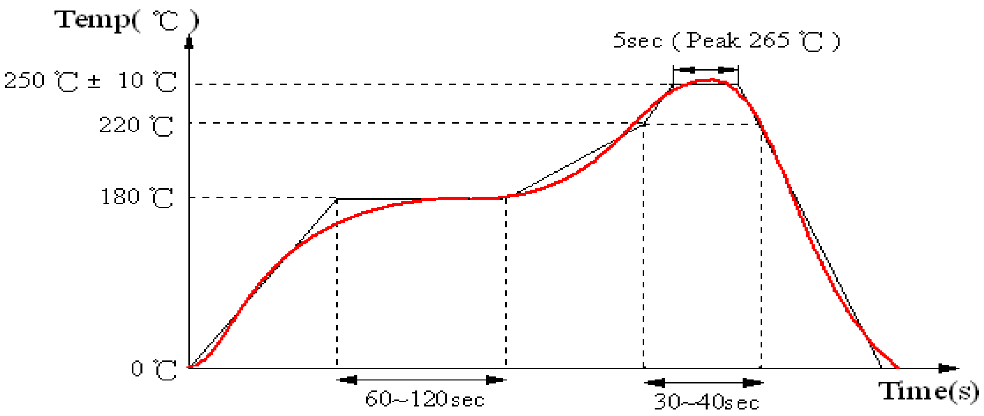
Use rosin-based flux. Don’t use highly acidic flux with halide content exceeding 0.2wt% (chlorine conversion value).

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　保管 Storage

①. 保管期限 Storage period

距麦捷出厂检验时间六个月内，产品可以使用；检验时间可以通过包装外侧标记的检验号确认；若时间超出六个月，应检查焊接性能后方可使用。Products which inspected in MICROGATE over 6 months ago should be examined and used, which can be confirmed with inspection No. marked on the container. Solder ability should be checked if this period is exceeded.

②．保存条件 Storage conditions

●存放货物的库房应满足以下条件 Products should be storage in the warehouse on the following conditions

温度 Temperature: ≤40℃

湿度 Humidity　: ≤ 70% relative humidity

不允许温、湿度有极剧变化。No rapid change on temperature and humidity

●禁止将产品保管在腐蚀性物质中，例如硫磺、氯气或者酸，否则将引起端头氧化，导致降低焊接性。Don’t keep products in corrosive gases such as sulfur, chlorine gas or acid, or it may cause oxidization of electrode, resulting in poor solder ability.

●为了避免受潮气、灰尘等物质的影响，产品应保管于货架上。Products should be storage on the palette for the prevention of the influence from humidity, dust and so on.

●产品保管在库房中时，应避免热冲击，振动以及直接光照等等。Products should be storage in the warehouse without heat shock, vibration, and direct sunlight and so on.

●产品应密封包装 Products should be storage under the airtight packaged condition.