客户 CUSTOMER: 日期 DATE:

纳入仕样书
SPECIFICATION

产 品 名 称 PRODUCT NAME: Triplexer
贵 司 料 号 YOUR PART NO.:
敝 司 料 号 OUR PART NO.: MTPX22M162333P69-T08 Preliminary
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 8 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	2019.07.25	初稿 Constitute	梁启新

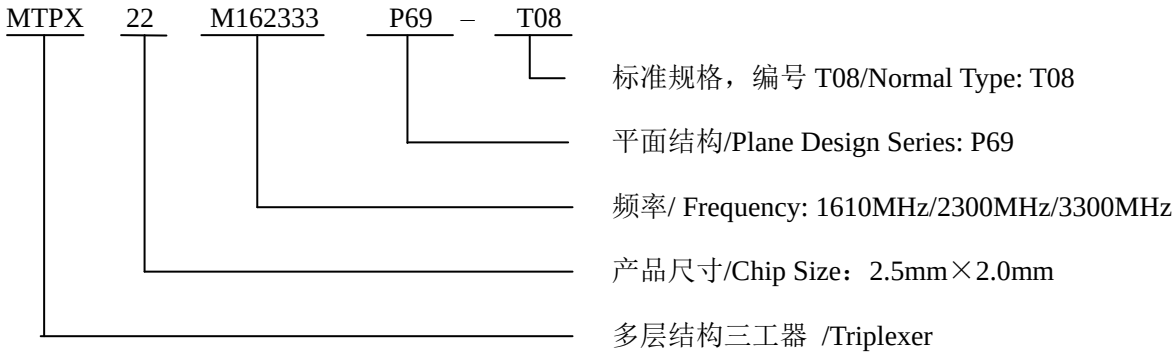
目录 CATALOG

1 适用范围 Scope

麦捷 Triplexer（MTPX 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。

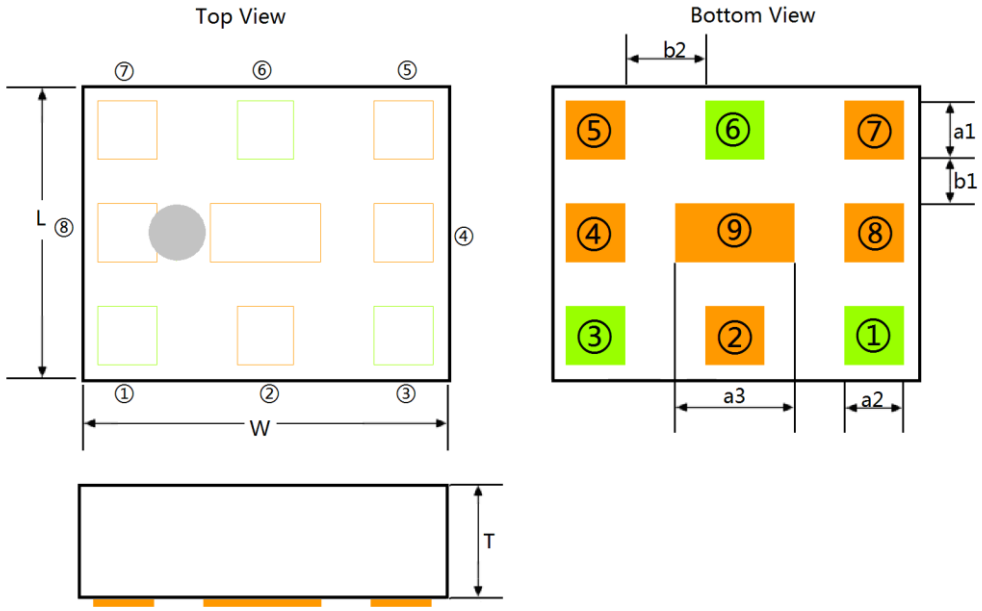
"Microgate" Microwave Triplexer series are designed to be used in 5G、LTE、WiFi、, Bluetooth、PDA & Cordless phones with low insertion loss and high attenuation as well as small size SMD chip design, which can simplify your complex tuning and circuit design.

2 品名构成 Product Identification



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

Unit：mm



Pin Configuration

①	②	③	④	⑤	⑥	⑦	⑧	⑨
Middle Band	GND	High Band	GND	Common	GND	Low Band	GND	GND

Dimension

W	L	T	a1	a2	a3	b1	b2
2.50±0.20	2.00±0.20	0.65 max	0.40±0.10	0.40±0.10	0.90±0.15	0.30±0.10	0.55±0.15

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 (5 to 35℃)

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℃

LB:Low Band Port MB: Middle Band Port HB: High Band Port ANT: Common Port

Low Band Port

No.	Item		Specifications (dB)
1	Insertion Loss （ANT-LB）	617 ~ 960 MHz	0.42 max at +25 ℃ 0.52 max at -40 ~ +85 ℃
2		1427 ~ 1511 MHz	0.70 max at +25 ° 0.80 max at -40 ~ +85 ℃
3		1511 ~ 1610 MHz	0.80 max at +25 ℃ 0.90 max at -40 ~ +85 ℃
4	Attenuation （ANT-LB）	2300 ~ 2690 MHz	21.0 min
5		3300 ~ 3400 MHz	32.0 min
6		3400 ~ 3800 MHz	32.0 min
7		5150 ~ 5925 MHz	37.0 min
8	VSWR (ANT)	617 ~ 1610 MHz	2.0 max
9	VSWR (LB)	617 ~ 1610 MHz	2.0 max
10	Power capacity ANT-LB	617 ~ 1610 MHz	3W Max@50% Duty

Middle Band Port

No.	Item		Specifications (dB)
1	Insertion Loss （ANT-MB）	2300 ~ 2400 MHz	1.60 max at +25 ℃ 1.70 max at -40 ~ +85 ℃
2		2400 ~ 2500 MHz	1.00 max at +25 ℃ 1.10 max at -40 ~ +85 ℃
3		2500 ~ 2690 MHz	1.40 max at +25 ℃ 1.50 max at -40 ~ +85 ℃
4	Attenuation （ANT-MB）	617 ~ 960 MHz	21.0 min
5		960 ~ 1511 MHz	19.0 min
6		1511 ~ 1610 MHz	17.0 min
7		3300 ~ 3400 MHz	17.0 min
8		3400 ~ 3800 MHz	22.0 min
9		5150 ~ 5925 MHz	24.0 min
10	VSWR (ANT)	2300 ~ 2690 MHz	2.0 max
11	VSWR (MB)	2300 ~ 2690 MHz	2.0 max
12	Power capacity ANT-MB	2300 ~ 2690 MHz	1.6W Max

High Band Port

No.	Item		Specifications (dB)
1	Insertion Loss （ANT-HB）	3300 ~ 3400 MHz	1.35 max at +25 ℃ 1.45 max at -40 ~ +85 ℃
2		3400 ~ 3800 MHz	1.20 max at +25 ℃ 1.30 max at -40 ~ +85 ℃
3		5150 ~ 5925 MHz	0.75 max at +25 ℃ 0.85 max at -40 ~ +85 ℃
4	Attenuation （ANT-HB）	617 ~ 960 MHz	22.0 min
5		960 ~ 1511 MHz	19.0 min
6		1511 ~ 1610 MHz	17.0 min
7		2300 ~ 2690 MHz	12.0 min
8	VSWR (ANT)	3300 ~ 3400 MHz	2.0 max
9		3400 ~ 3800 MHz	2.0 max
10		5150 ~ 5925 MHz	2.0 max
11	VSWR (HB)	3300 ~ 3400 MHz	2.0 max
12		3400 ~ 3800 MHz	2.0 max
13		5150 ~ 5925 MHz	2.0 max
14	Power capacity ANT-HB	3300 ~ 5925 MHz	1.0W Max

Isolation

No.	Item			Specifications (dB)
1	Isolation	LB-MB	617 ~ 1511 MHz	19.0 min
2			1511 ~ 1610 MHz	17.0 min
3			2300 ~ 2690 MHz	15.0 min
			3300 ~ 3400 MHz	15.0 min
			3400 ~ 3800 MHz	15.0 min
4			5150 ~ 5925 MHz	15.0 min
5		LB-HB	617~ 1511 MHz	19.0 typ.
			1511 ~ 1610 MHz	18.0 min
			2300 ~ 2690 MHz	29.0 min
			3300 ~ 3400 MHz	29.0 min
6			3400 ~ 3800 MHz	34.0 min
			5150 ~ 5925 MHz	34.0 min
7		MB-HB	617 ~ 1511 MHz	34.0 min
8			1511 ~ 1610 MHz	32.0 min
9			2300 ~ 2690 MHz	11.0 min
10			3300 ~ 3400 MHz	15.0 min
			3400 ~ 3800 MHz	23.0 min
11			5150 ~ 5925 MHz	23.0 min

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。

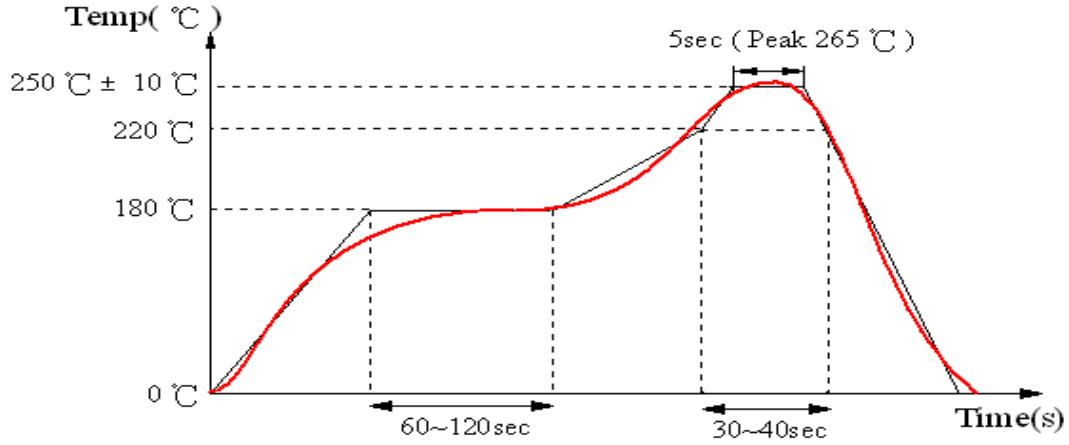
Use rosin-based flux. Don't use highly acidic flux with halide content exceeding 0.2wt% (chlorine conversion value).

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.



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	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