Preliminary

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DATA SHEET

WIRELESS COMPONENTS

Band Pass Filter

BPF1608LM10R5000A

5.0 GHZ

1608 Series

YAGEO Phycomp

ıct Specification – Dec. 6. 2018 V.Pre

FEATURES

- Compact size design
- RoHS compliant

APPLICATIONS

- WLAN, 802.11a/n
- ISM Band

ORDERING INFORMATION

All part numbers are identified by the series, packing type, material, size, antenna type, working frequency and packing quantity.

PART NUMBER

BPF1608 LM 10 R 5000A

(1) (2) (3) (4) (5) (6)

(1) PRODUCT

BPF = Band Pass Filter

(2) SIZE

1608 = 1.60 × 0.8 mm

(3) MATERIALS

Material Code LM

(4) TYPE

10 = Type 10

(5) PACKING STYLE

R = Tape and Reel

(6) WORKING FREQUENCY

5000 = 5.0 GHz

SPECIFICATION

Table 1

DESCRIPTION	Value
Pass Band	4900 ~ 5950MHz
Insertion Loss	1.3 max. at 25°C
Return Loss	10dB (Min.)
Attenuation	38.0 dB @ 30 - 2700 MHz 16.0 dB @ 3453 - 3547 MHz 33.0 dB @ 3667 - 3883 MHz 9.0 dB @ 6900 - 7093 MHz 32.0 dB @ 7333 - 7750 MHz 40.0 dB @ 10600 - 11650 MHz 18.0 dB @ 15540 - 17760 MHz
Operating Temperature	-40 ~ 85°C

DIMENSIONS

Table 2 Mechanical Dimension

	DIMENSION
L (mm)	1.60±0.15mm
W (mm)	0.80±0.15mm
T (mm)	0.60±0.15mm
P1 (mm)	0.25±0.10mm
P2 (mm)	0.40±0.10mm
P3(mm)	0.25±0.10mm
D1 (mm)	0.10±0.10mm
D2 (mm)	0.25±0.10mm
D3(mm)	0.10±0.10mm
D4(mm)	0.60±0.10mm

Table 3 Termination configuration

TERMINAL NAME	FUNCTION
P1	I/O port
P2	GND
P3	I/O port

OUTLINES

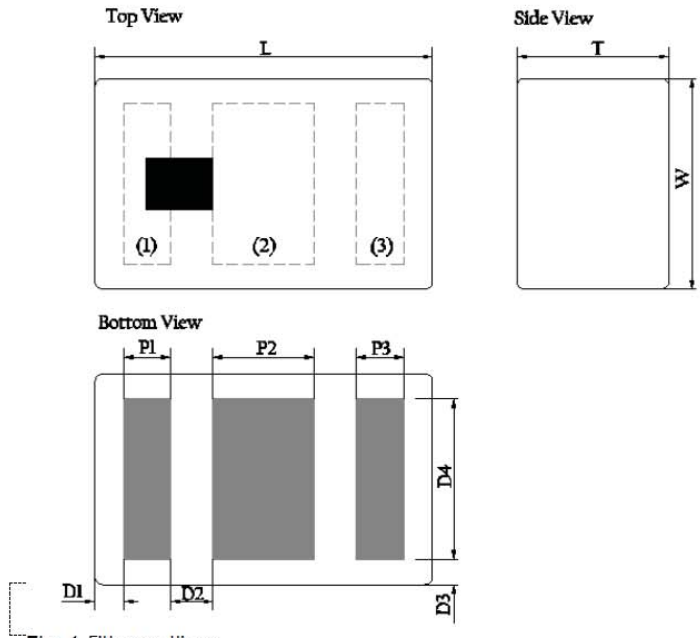
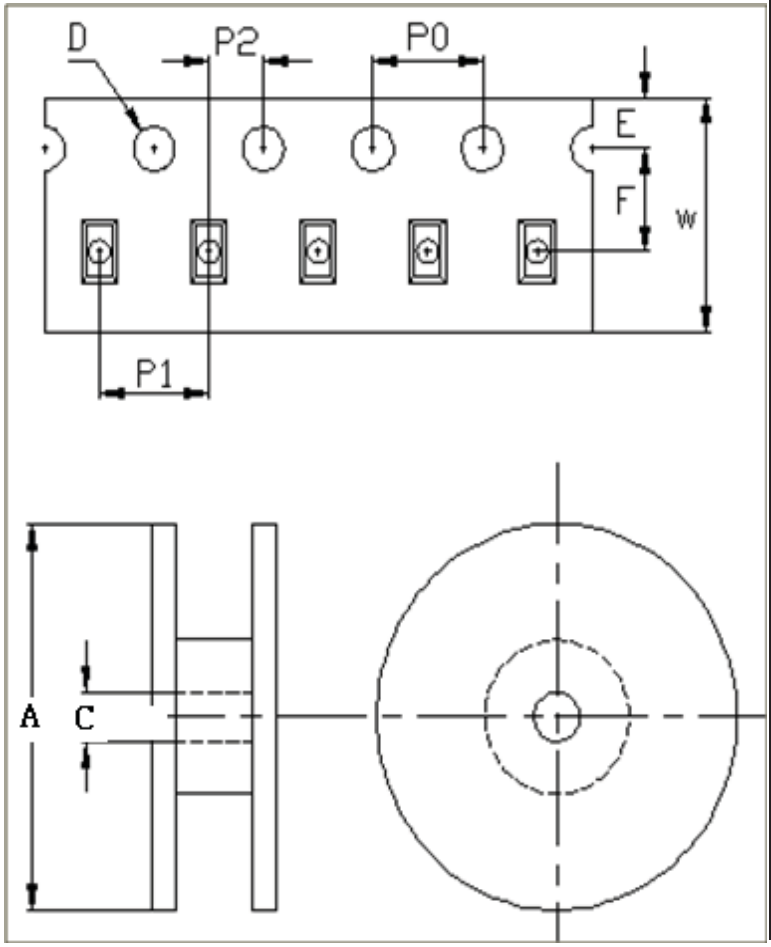


Fig. 1 Filter outlines

REVISION HISTORY

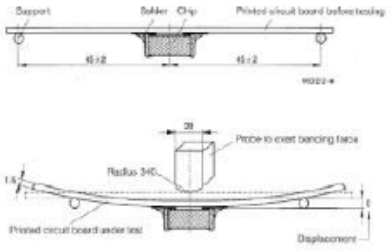
REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version Pre	Oct. 18, 2019	-	- Preliminary data sheet for Diplexer, 2.4/5.0 GHz application, 1608 series refer to RDV00

2.PACKING SPEC



Serial no	Checking note	Index	Spec (mm)		
1	Tape width	W	8.00	±	0.3 0.1
2	Sprocket hole	D	1.55	±	0.1
3	Distance sprocket hole to sprocket hole	Po	4.00	±	0.10
4	Distance pocket to pocket	P1	4.00	±	0.10
5	Distance sprocket hole to pocket	P2	2.00	±	0.01
6	Distance sprocket hole to outside	E	1.75	±	0.10
7	Distance sprocket hole to pocket	F	3.50	±	0.05
8	Internal diameter of reel	C	13.00	±	0.50
9	External diameter of reel	A	180.00	±	1.00

3.Reliability Test

Test Item	Procedure	Requirements	Remark (Reference)
Vibration	1. 5g's for 20 min., 12 cycles each of 3 orientations 2. Note: Use 8"X5" PCB .031" thick 7 secure points on, one long side and 2 secure points at corners of opposite sides. 3. Parts mounted within 2" from any secure point. Test from 10-2000 Hz.	No Visible Damage.	MIL-STD-202 Method 204
Mechanical Shock	Three shocks in each direction shall be applied along the three mutually perpendicular axes of the test specimen (18 shocks) Peak value: 1,500g's Duration: 0.5ms Velocity change: 15.4 ft/s Waveform: Half-sine	No Visible Damage.	MIL-STD-202 Method 213
Humidity	1. Humidity: 85% R.H., Temperature: 85 ±2 °C. 2. Time: 500±24 hours. 3. Measurement at 24±2hrs after test condition.	No Visible Damage. Fulfill the electrical specification.	MIL-STD-202 Method 106
Board Flex (For SMD type)	Mounting method: IR-Reflow. PCB Size (L:100 × W:40 × T:1.6mm) Apply the load in direction of the arrow until bending reaches: **1 mm for all types.** 	No Visible Damage.	AEC-Q200 005

V

Test Item	Procedure	Requirements	Remark (Reference)
Electrical Characterization		Fulfill the electrical specification.	User Spec.
Thermal Shock	1. Preconditioning: 150±10℃ / 1 hr, then keep for 24±1 hrs at room temp. 2. Initial measure: Spec: refer Initial spec. 3. Rapid change of temperature test: **-30℃ to +85℃; 100 cycles;** 15 Minutes at Lower category temperature; 15 Minutes at Upper category temperature.	1. No Visible Damage. 2. Fulfill the electrical spec.	MIL-STD-202 107
Temperature Cycling	Initial measure: Spec: refer Initial spec. Temperature test: Soak Mode=1 (Cycle/hours). **100 Cycles (-30℃ to +85℃)** Measurement at 24+/-2Hours after test condition.	1. No Visible Damage. 2. Fulfill the electrical spec.	JESD22 JA104
High Temperature Exposure	1. Initial measure: Spec: refer Initial spec. 2. Unpowered **500 hours @ T=+85 ℃** 1. Measurement at 24±2 hours after test.	1. No Visible Damage. 2. Fulfill the electrical spec.	MIL-STD-202 108
Low Temperature Storage	1. Initial measure: Spec: refer Initial spec. 2. Unpowered **500 hours @ T=-30 ℃** 1. Measurement at 24±2 hours after test.	1. No Visible Damage. 2. Fulfill the electrical spec.	MIL-STD-202 108
Solderability (SMD Bottom Side)	Dipping method: 1. Temperature: 235±5°C 2. Dipping time: 3±0.5s.	The solder coverage: **> 95%**	IEC 60384-21/22 4.1
Soldering Heat Resistance (RSH)	Preheating temperature: 150±10°C. Preheating time: 1~2 min. Solder temperature: 260±5 °C. Dipping time: 5±0.5s.	No Visible Damage.	IEC 60384-21/22 4.1

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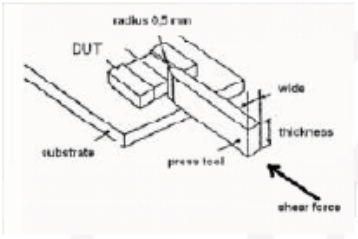
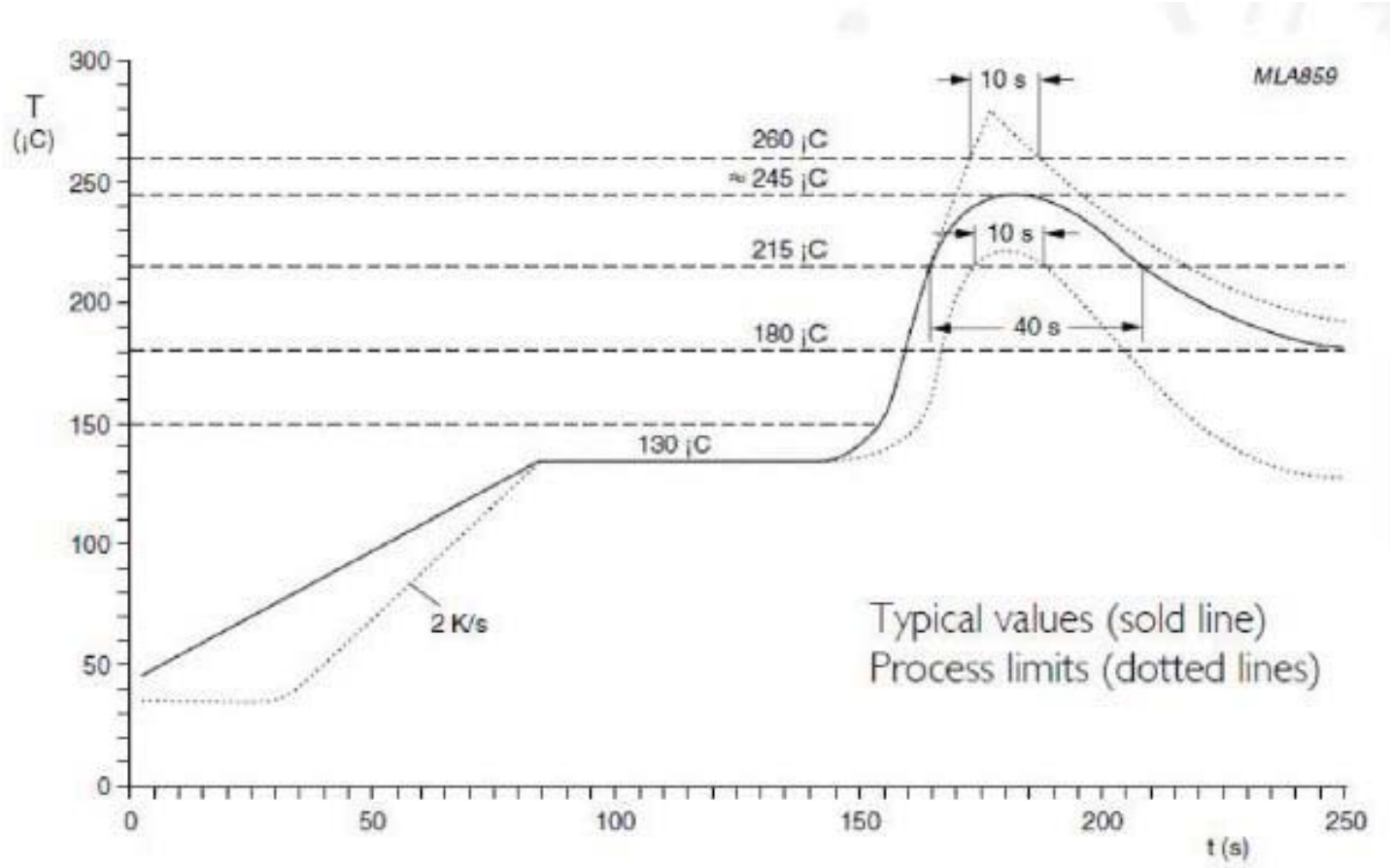
Test Item	Procedure	Requirements	Remark (Reference)
Adhesion (For SMD type)	**Apply Force for 60 seconds.** **Size≥1608: 5N** **Size=1005: 2.5N** **Size<1005: 1N** 	No Visible Damage Magnification of 20X or greater may be employed for inspection of the mechanical integrity of the device body terminals and body/terminal junction.	AEC-Q200 006
Physical Dimension	Any applicable method using x10 magnification, micrometers, calipers, gauges, contour projectors, or other measuring equipment, capable of determining the actual specimen dimensions.	In accordance with specification.	JESD22 JB100

4.Reflow Profile

Soldering Profile for Lead-free Process



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