

P/N: WTL6A12452
SAW Filter 1.4*1.1mm



Customer	WTL
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SPECIFICATION

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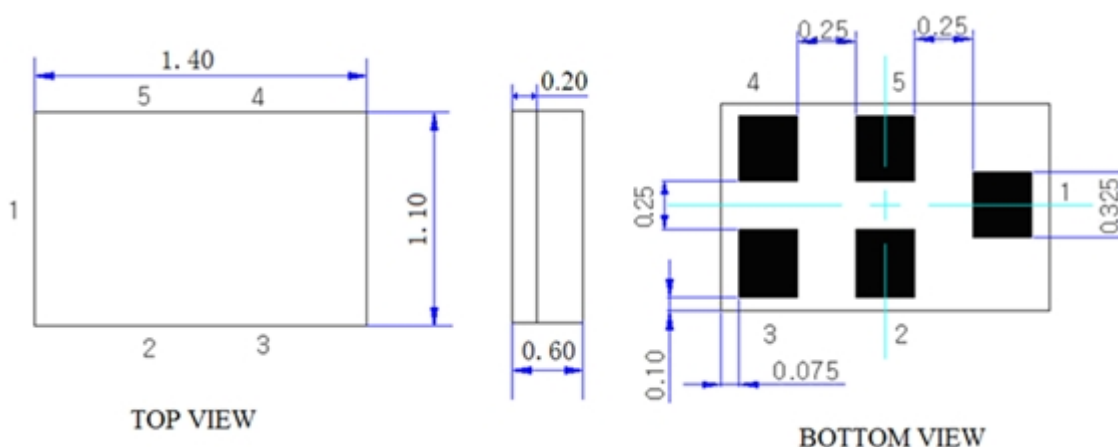
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1. Application

- Low-loss RF GPS + COMPASS + GLONASS filter
- Usable passband: 2.0 MHz for GPS, 4.092 MHz for COMPASS and 8.34 MHz for GLONASS
- Impedance 50 ohm input and output
- Unbalanced to unbalanced operation
- RoHS compatible

2. Package Dimension (PKG SIZE 1.4 x 1.1mm)



BOTTOM VIEW

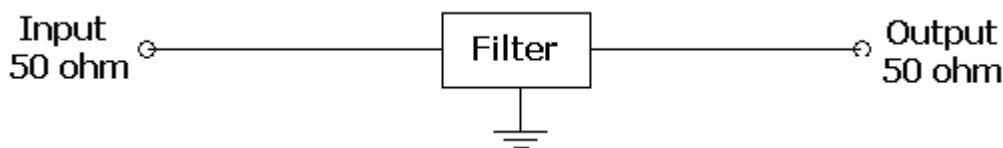
Pin configuration

- 1. Input
- 4. Output
- 2,3,5 To be grounded

3. Maximum Rating

Items	Conditions
Operation temperature rang	-30°C ~ +85°C
Storage temperature rang	-40°C ~ +85°C
ESD voltage	ESD(MM) : 50VDC
Sensitive discharge device	ESD(HBM) : 175VDC
DC Voltage VDC	3V (25+/-2 deg.C)
Max Input Power	15dBm 2000h

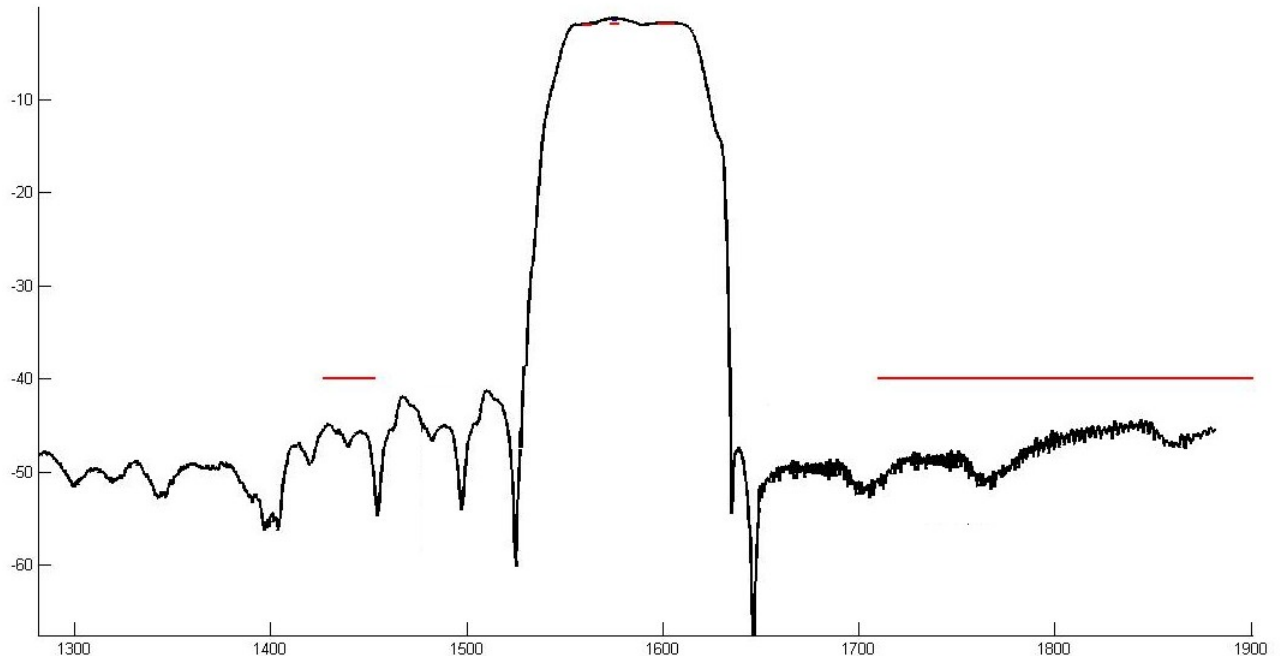
4. Test Circuit



5. ELECTRICAL SPECIFICATION

	Unit	Minimum	Typical	Maximum
Center Frequency	MHz	-	1582.4	-
Insertion Loss				
1574.42~1576.42 MHz	dB		1.3	1.5
1559.05~1563.15 MHz			1.8	2.0
1573.37~1577.47 MHz			1.5	2.0
1597.78~1605.66 MHz			1.8	2.0
VSWR				
1574.42~1576.42 MHz	dB		1.2	2.0
1559.05~1563.15 MHz			1.6	2.0
1573.37~1577.47 MHz			1.4	2.0
1597.78~1605.66 MHz			1.6	2.0
Group delay ripple				
1597.78~1605.66 MHz	ns		4	12
Attenuation				
10~824 MHz	dB	47	51	
824~925 MHz		47	51	
1427~1453 MHz		40	45	
1710~1785 MHz		40	45	
1850~1910 MHz		40	44	-
1920~1980 MHz		39	44	
2400~2500 MHz		43	45	
2500~2570 MHz		37	42	
2600~3000 MHz		30	38	
4900~5850 MHz		15	24	
Input/Output Impedance	Ohms		50	

6. Frequency Characteristics



7. ENVIRONMENTAL CHARACTERISTICS

7.1 High temperature exposure

Subject the device to +85°C for 16 hours. Then release the filter into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in 5.

7.2 Low temperature exposure

Subject the device to -40°C for 16 hours. Then release the device into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in 5.

7.3 Temperature cycling

Subject the device to a low temperature of -40°C for 30 minutes. Following by a high temperature of +85°C for 30 Minutes. Then release the device into the room conditions for 24 hours prior to the measurement. It shall meet the specifications in 5.

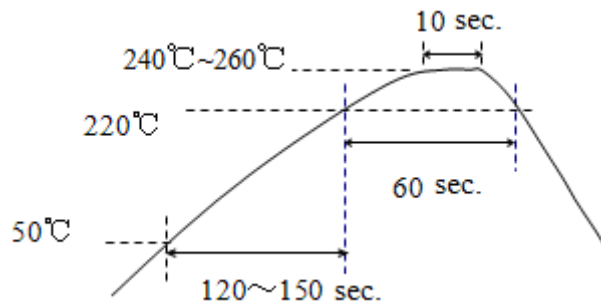
7.4 Resistance to solder heat

- 1、immerge the solder bath at 260°C for 10 sec.
- 2、the iron at 370°C for 3 sec

7.5 Solderability

Submerge the device terminals into the solder bath at 245°C \pm 5°C for 5s, More than 95% area of the soldering pad must be covered with new solder. It shall meet the specifications in 5.

7.6 Reflow soldering



The specimen shall be passed through the reflow furnace with the condition shown in the above profile for 1 time.

The specimen shall be stored at standard atmospheric conditions for 1h, after which the measurement shall be made. Test board shall be 1.6 mm thick. Base material shall be glass fabric base epoxy resin.

7.7 Mechanical shock

Drop the device randomly onto the concrete floor from the height of 1m 3 times. the device shall fulfill the specifications in 5.

7.8 Vibration

Subject the device to the vibration for 1 hour each in x,y and z axes with the amplitude of 1.5 mm at 10 to 55 Hz. The device shall fulfill the specifications in 5.

8. REMARK

8.1 Static voltage

Static voltage between signal load & ground may cause deterioration & destruction of the component. Please avoid static voltage.

8.2 Ultrasonic cleaning

Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning

8.3 Soldering

Only pad component may be solded. Please avoid soldering another part of component.

9. Packing

9.1 Dimensions

(1) Carrier Tape: Figure 1

(2) Reel: Figure 2

(3) The product shall be packed properly not to be damaged during transportation and storage.

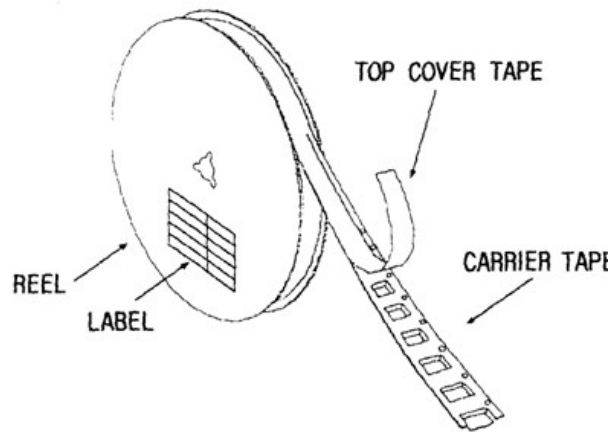
9.2 Reeling Quantity

3000 pcs/reel ϕ 178mm

10000 pcs/reel ϕ 259mm

9.3 Taping Structure

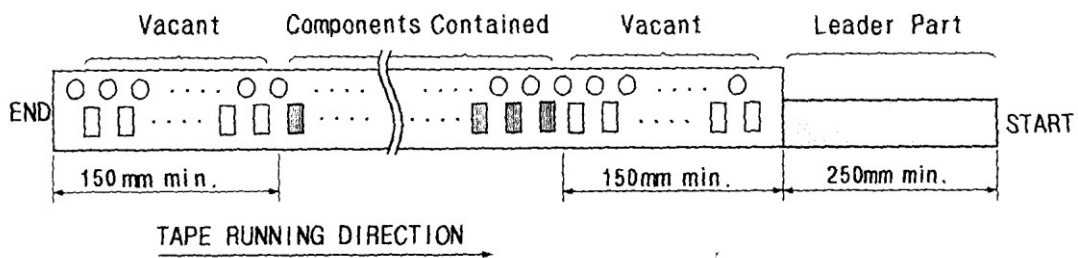
(4) The tape shall be wound around the reel in the direction shown below.



(5) Label

Device Name	
Marking	
User Product Name	
Quantity	
Lot No.	

(6) Leader part and vacant position specifications.

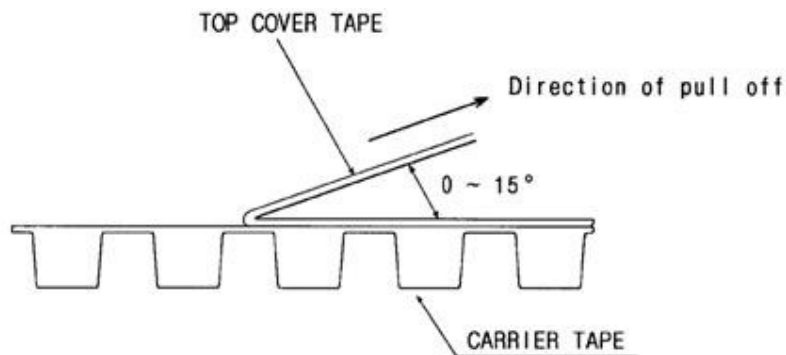


10. TAPE SPECIFICATIONS

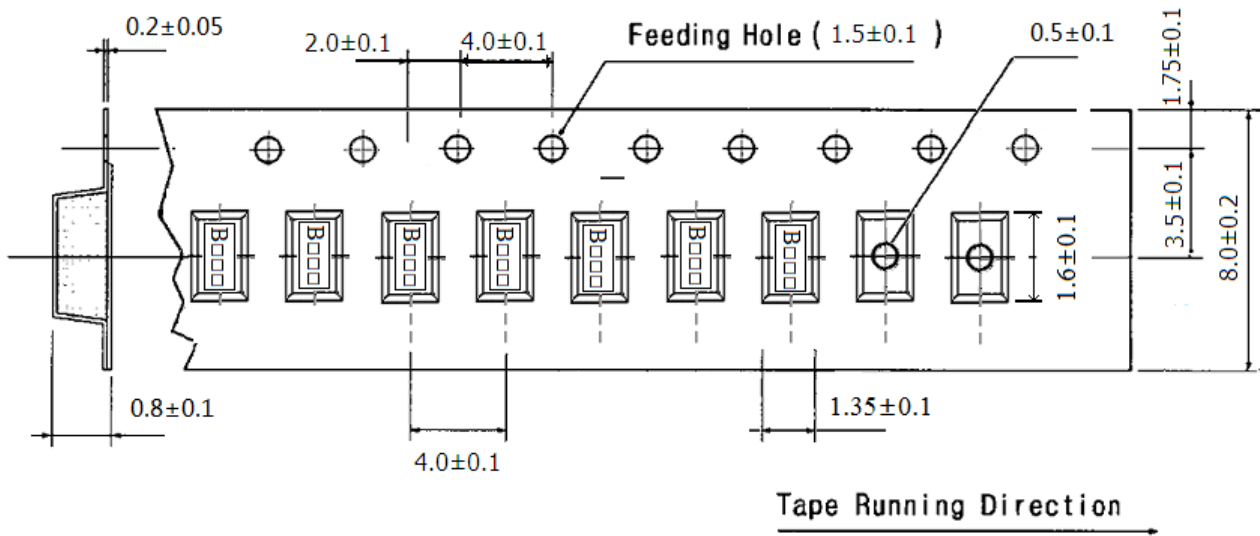
10.1 Tensile Strength of Carrier Tape: 4.4N/mm width

10.2 Top Cover Tape Adhesion (See the below figure)

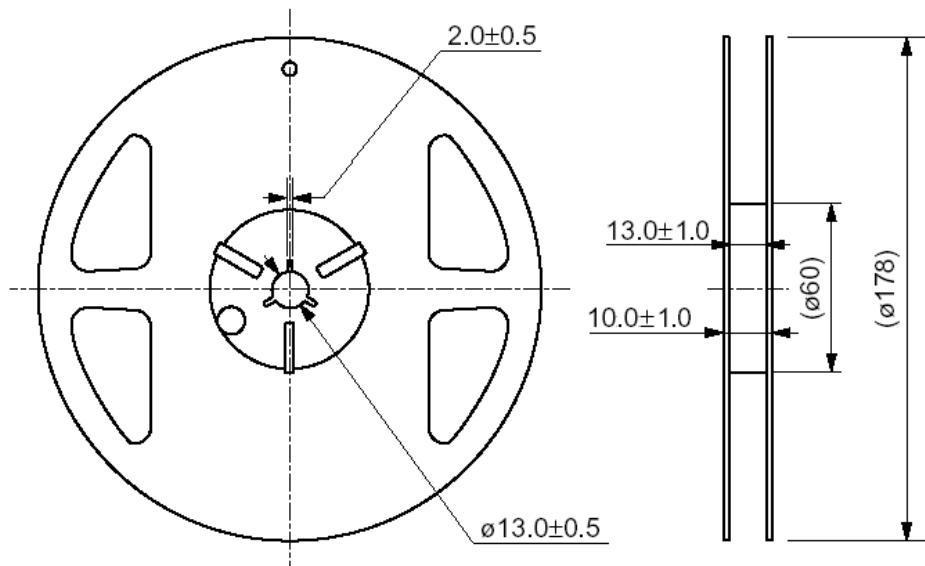
- (1) pull off angle: 0~15°
- (2) speed: 300mm/min.
- (3) force: 20~70g



[Figure 1] Carrier Tape Dimensions



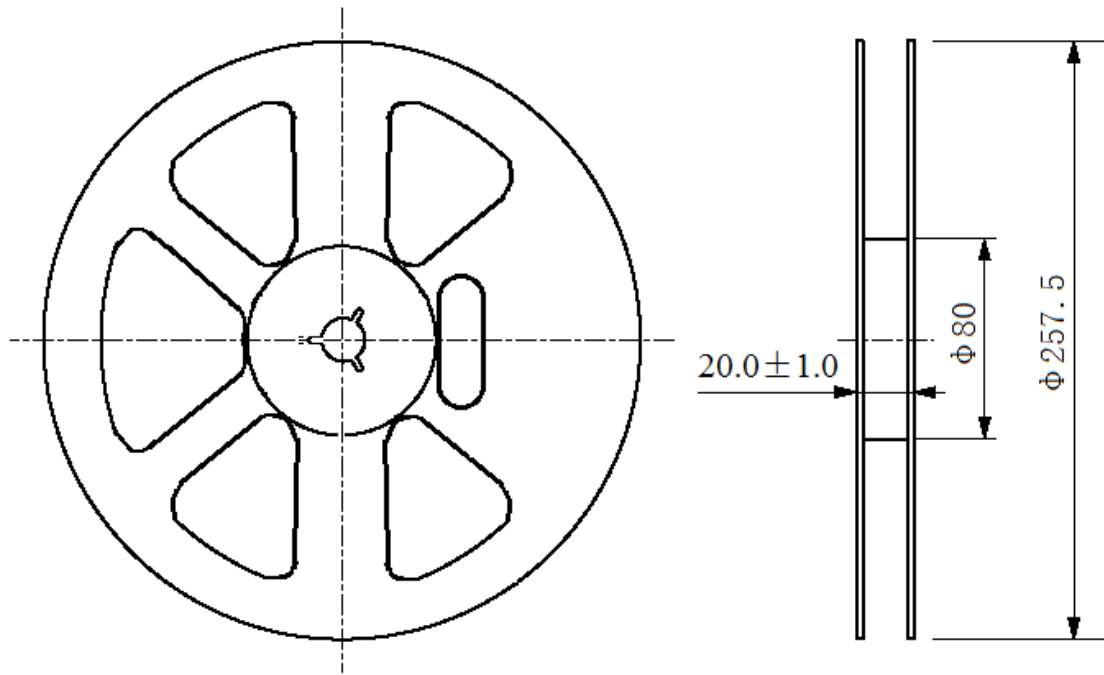
[Figure 2] 3000 pcs/reel ϕ 178mm



ϕ 178 Reel Dimension

(in mm)

10000 pcs/reel ϕ 257.5mm



$\phi 257.5$ Reel Dimension

(in mm)