



SAW Components
Data Sheet
CQTSF1580M00.00

Customer's Approval Certificate	
Complies with Directive 2002/95/EC (RoHS)	
Please return this Page Via email as a certification of Your approval	
Checked & Approval by:	Date:

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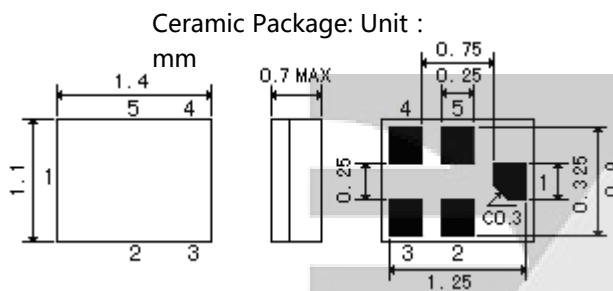
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Features

SAW filter for Beidou & GPS & GLONASS.

- 1 High stability and reliability with good performance and no adjustment.
- 2 Narrow and sharp pass band characteristics. RoHS compatible.
- 3 Low insertion loss and deep stop band attenuation for interference.
- 4 Low – loss SAW filter for GPS.
- 5 Package size 1.4*1.1

Package Dimensions



Pin Configuration

1	Input
4	Output
2,3,5	Ground

Marking



Top View, Laser Marking

"G10": Part number

" 1": Terminal 1

" * *": Lot number (The code shown below varies in a 4-year cycle)

Code	1	2	3	4	5	6	7	8	9	10	11	12
2015	a	b	c	d	e	f	g	h	i	j	k	m
2016	n	p	q	r	s	t	u	v	w	x	y	z
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z

Maximum Ratings

Rating	Value	Unit
DC Voltage (between any Terminals)	V_{DC}	10 V
RF Power (in BW)	P	13 dBm
Operating Temperature Range	T_A	-40 ~ +85 °C
Storage Temperature Range	T_{stg}	-40 ~ +85 °C

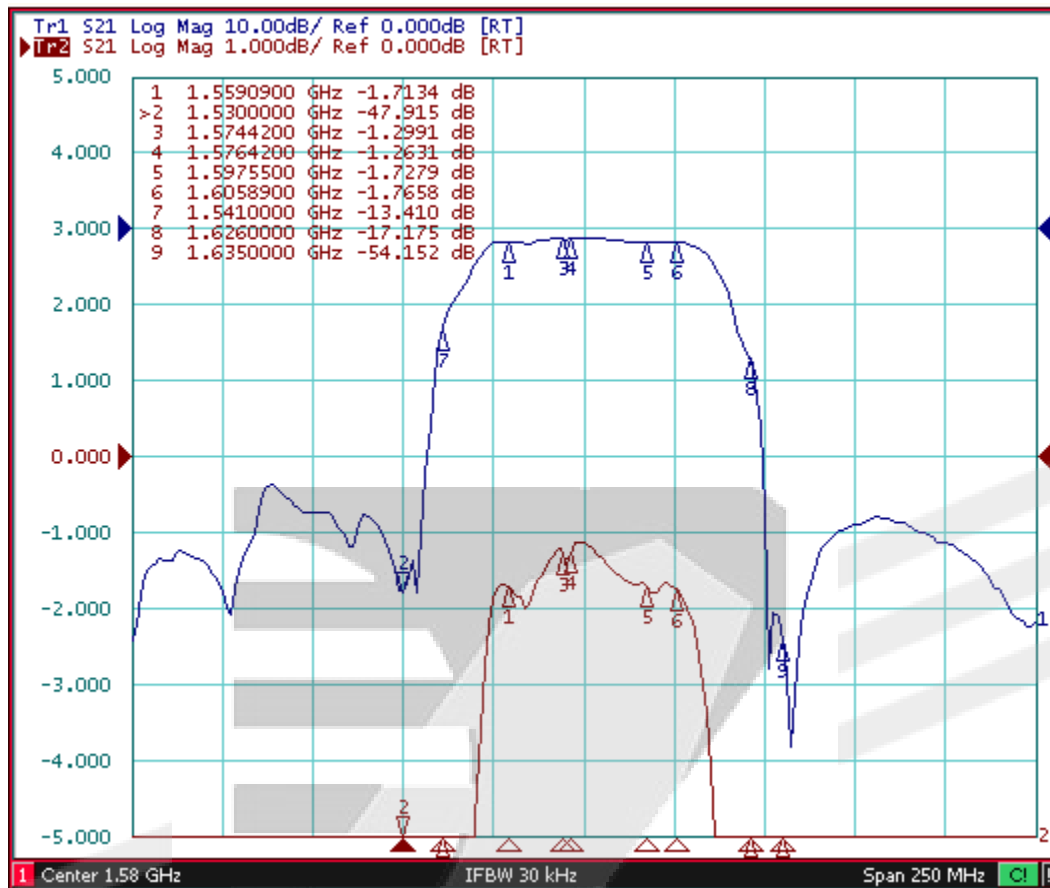
Electrical Characteristics:

Item	Minimum	Typical	Maximum	Unit
Insertion Loss				
<i>IL</i>				
1559.09 ... 1563.09 MHz		1.8	2.1	dB
1574.42 ... 1576.42 MHz		1.3	1.6	dB
1597.55 ... 1605.89 MHz		1.8	2.1	dB
Passband Ripple				
<i>Pr</i>				
1559.09 ... 1563.09 MHz		0.2	0.5	dB
1574.42 ... 1576.42 MHz		0.2	0.4	dB
1597.55 ... 1605.89 MHz		0.3	0.6	dB
VSWR				
<i>V_{swr}</i>				
1559.09 ... 1563.09 MHz		1.6	1.9	
1574.42 ... 1576.42 MHz		1.2	1.6	
1597.55 ... 1605.89 MHz		1.3	1.8	
Group delay Ripple				
<i>G_{dr}</i>				
1559.09 ... 1563.09 MHz		2	7	ns
1574.42 ... 1576.42 MHz		2	7	ns
1597.55 ... 1605.89 MHz		2	8	ns
Absolute Attenuation				
<i>α</i>				
DC ... 925.00 MHz	45	50		dB
925.00 ... 960.00 MHz	43	50		dB
1427.00 ... 1453.00 MHz	41	47		dB
1453.00 ... 1470.00 MHz	40	45		dB
1470.00 ... 1530.00 MHz	30	35		dB
1530.00 ... 1541.00MHz	7	13		dB
1626.00 ... 1635.00 MHz	10	17		dB
1635.00 ... 1700.00 MHz	33	37		dB
1710.00 ... 1785.00 MHz	45	50		dB
1850.00 ... 1910.00 MHz	43	48		dB
1920.00 ... 1980.00 MHz	42	48		dB
2110.00 ... 2170.00 MHz	40	45		dB
2300.00 ... 2400.00 MHz	40	44		dB
2400.00 ... 2500.00 MHz	39	43		dB
2500.00 ... 2570.00 MHz	38	42		dB
2570.00 ... 3000.00 MHz	33	39		dB
Input / Output Impedance (Nominal)		50		Ω



Typical Frequency Response

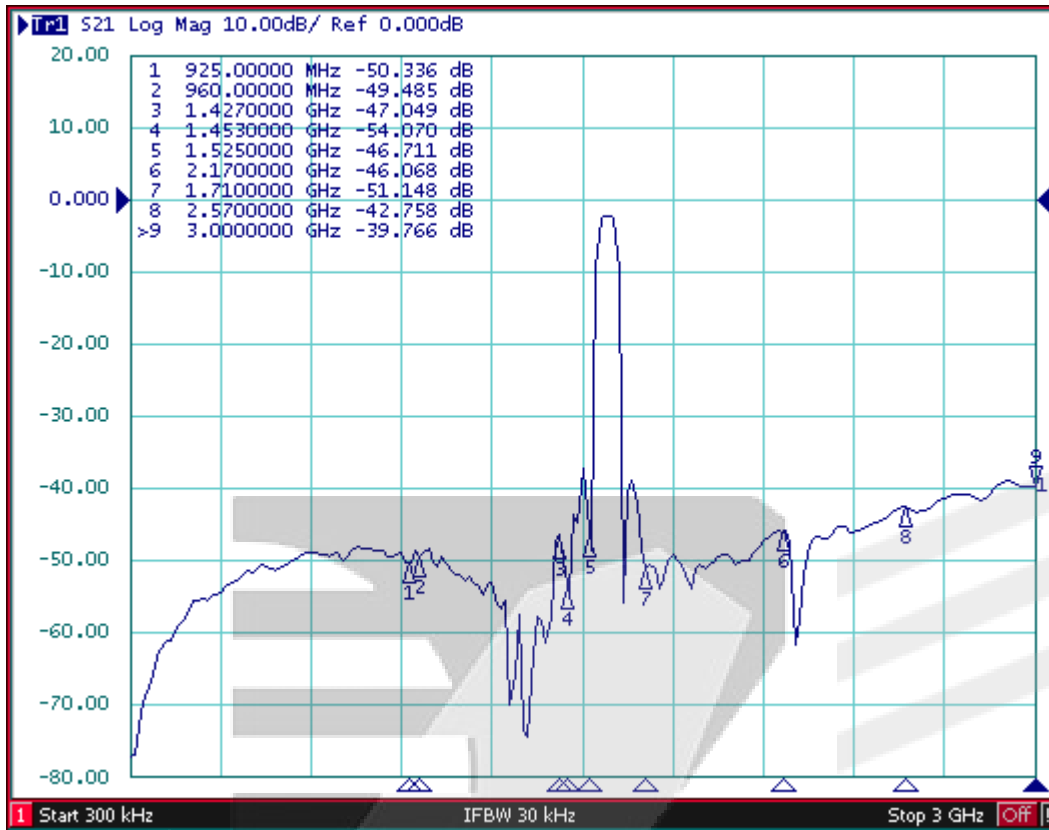
S21



S11 Group Delay



Far side

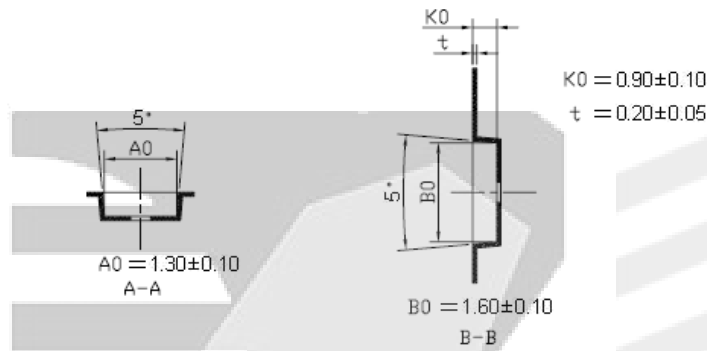
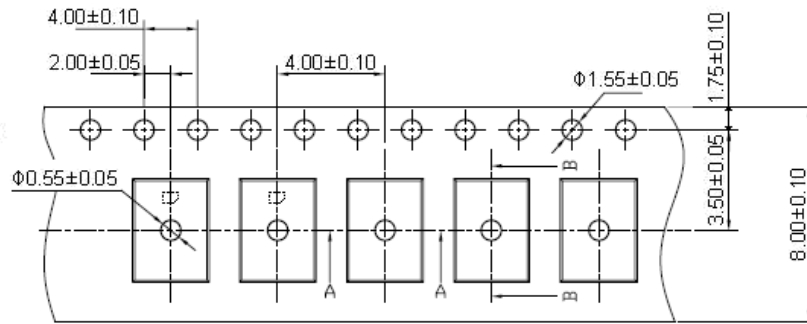


Stability Characteristics

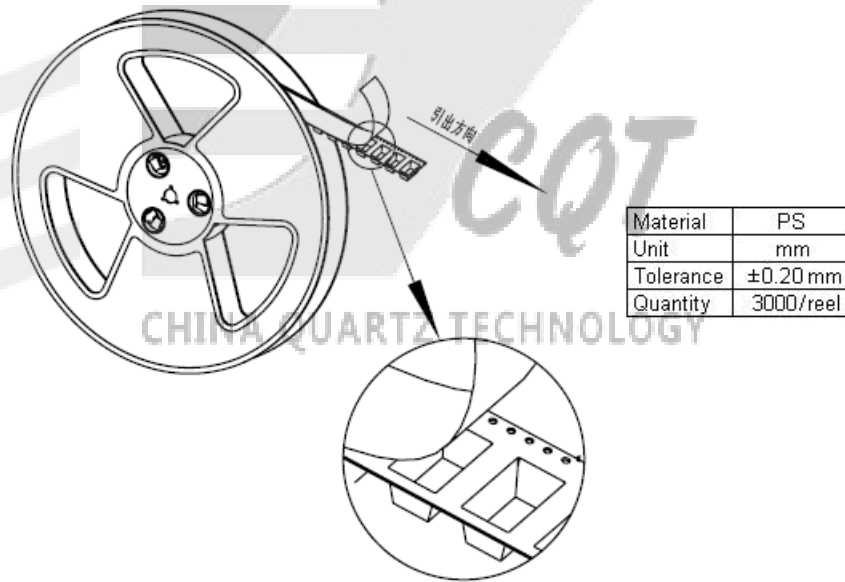
Test item	Condition of
1 Mechanical shock	(a) Drops: 3 times on concrete floor (b) Height: 1.0 m
2 Vibration resistance	(a) Frequency of vibration: 10~55Hz (b) Amplitude: 1.5 mm (c) Directions: X,Y and Z (d) Duration: 2 hours
3 Moisture resistance	(a) Condition: 40°C±2°C, 93+2 -3% RH. (b) Duration: 96 hours (c) Wait 4 hours before measurement
4 Climatic sequence	(a) +70°C for 16 hours (b) +55°C for 24 hours, 90~95% R.H. (c) -25°C for 2 hours (d) +40°C for 24 hours, 90~95% R.H. (e) Wait 4 hours before measurement
5 High temperature exposure	(a) Temperature: 85°C (b) Duration: 250 hours (c) Wait 4 hours before measurement
6 Temperature cycling	(a) +85°C for 30 minutes -40°C for 30 minutes repeated 120 times

Packing Information

Carrier Tape



Reel Dimensions



Outer Packing

Type	Quantity	Dimension	Description	Weight
Carton Box	10000	190×190×95	anti-static plastic bag & carton box 1 reel /	0.85
Carton Box II	20000	190×190×190		1.80

Unit: mm

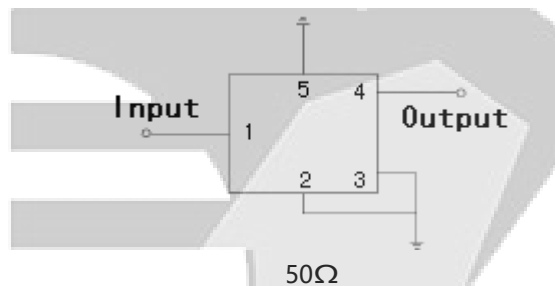
Unit: kg

Requirements: The SAW filter shall remain within the electrical specifications after tests.

Remarks

- SAW devices should not be used in any type of fluid such as water, oil, organic solvent, etc.
- Be certain not to apply voltage exceeding the rated voltage of components.
- Do not operate outside the recommended operating temperature range of components.
- Sudden change of temperature shall be avoided, deterioration of the characteristics can occur.
- Be careful of soldering temperature and duration of components when soldering.
- Do not place soldering iron on the body of components.
- Be careful not to subject the terminals or leads of components to excessive force.
- SAW devices are electrostatic sensitive. Please avoid static voltage during operation and storage.
- Ultrasonic cleaning shall be avoided. Ultrasonic vibration may cause destruction of components.

Test Circuit



Recommended Soldering Profile

