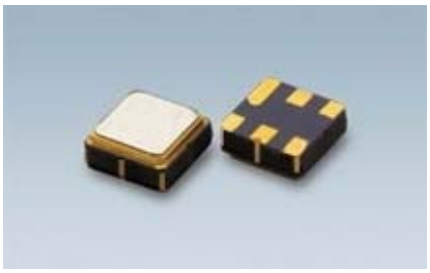
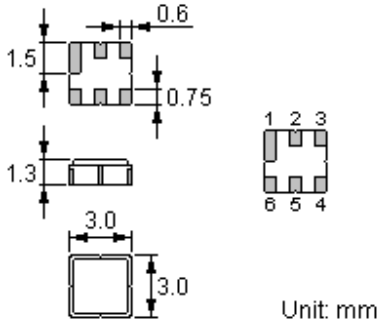
Features

- Low-loss RF filter for mobile systems
- Low amplitude ripple
- No matching network required for operation at 50Ω
- Ceramic package for **S**urface **M**ounted **T**echnology (**SMT**)
- Lead-free production and **RoHS** compliant



Package Dimensions

Ceramic Package: **DCC6C**



Unit: mm

Pin Configuration

2	Input
5	Output
1, 3, 4, 6	Ground

Marking

Top View, Laser Marking

"**ND**": Manufacturer's mark "**F**": SAW filter

"**9117**": Part number "・": 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
2009	A	B	C	D	E	F	G	H	J	K	L	M
2010	N	P	Q	R	S	T	U	V	W	X	Y	Z
2011	a	b	c	d	e	f	g	h	i	j	k	m
2012	n	p	q	r	s	t	u	v	w	x	y	z

Maximum Ratings

Rating		**Value**	**Unit**
Input Power Level	P	20	dBm
DC Voltage	V_{DC}	5	V
Operating Temperature Range	T_A	-40 ~ +85	°C
Storage Temperature Range	T_{stg}	-40 ~ +85	°C

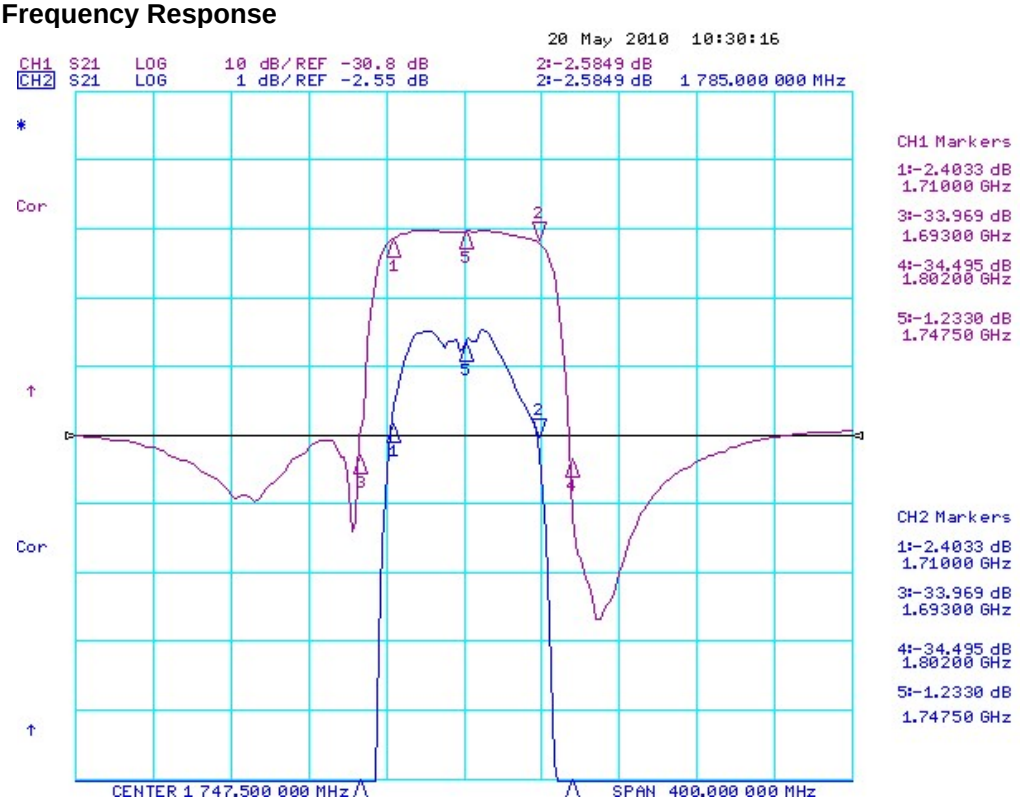
Electrical Characteristics

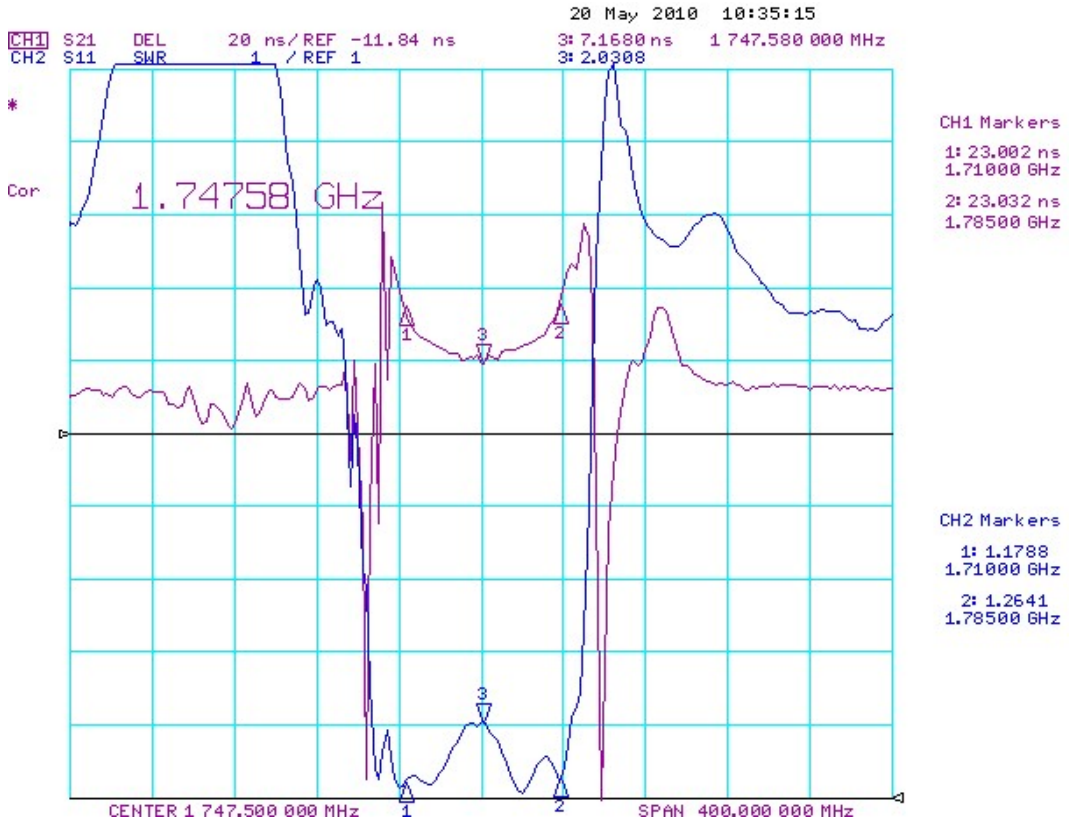
Item		Minimum	Typical	Maximum	Unit
Center Frequency	f_C		1747.50		MHz
Insertion Loss	*IL*				
1710.00 …. 1765.00 MHz		--	2.5 *2	4.0 *1 5.0 *4	dB
1765.00 …. 1785.00 MHz		--	2.5 *2	4.0 *3 5.0 *4	dB
Group Delay Ripple 1710.00 …. 1785.00 MHz			18	40	ns
Absolute Attenuation	*α*				
DC …. 960.00 MHz		20	25		dB
960.00 …. 1690.00 MHz		20	25		dB
1690.00 …. 1693.00 MHz		15 *3 10 *4	32 *2		dB
1802.00 …. 1805.00 MHz		15 *1	32 *2		dB
1805.00 …. 1880.00 MHz		28	34		dB
1880.00 …. 3200.00 MHz		25	31		dB
3200.00 …. 5000.00 MHz		4	28		dB
Amplitude Ripple (p-p) 1710.00 …. 1785.00 MHz	*Δα*		1.5 *2	3.0 *3 3.8 *4	dB
Intput VSWR 1710.00 …. 1785.00 MHz				2.2：1	
Output VSWR 1710.00 …. 1785.00 MHz				2.2：1	
Input / Output Impedance (Nominal)			50		Ω

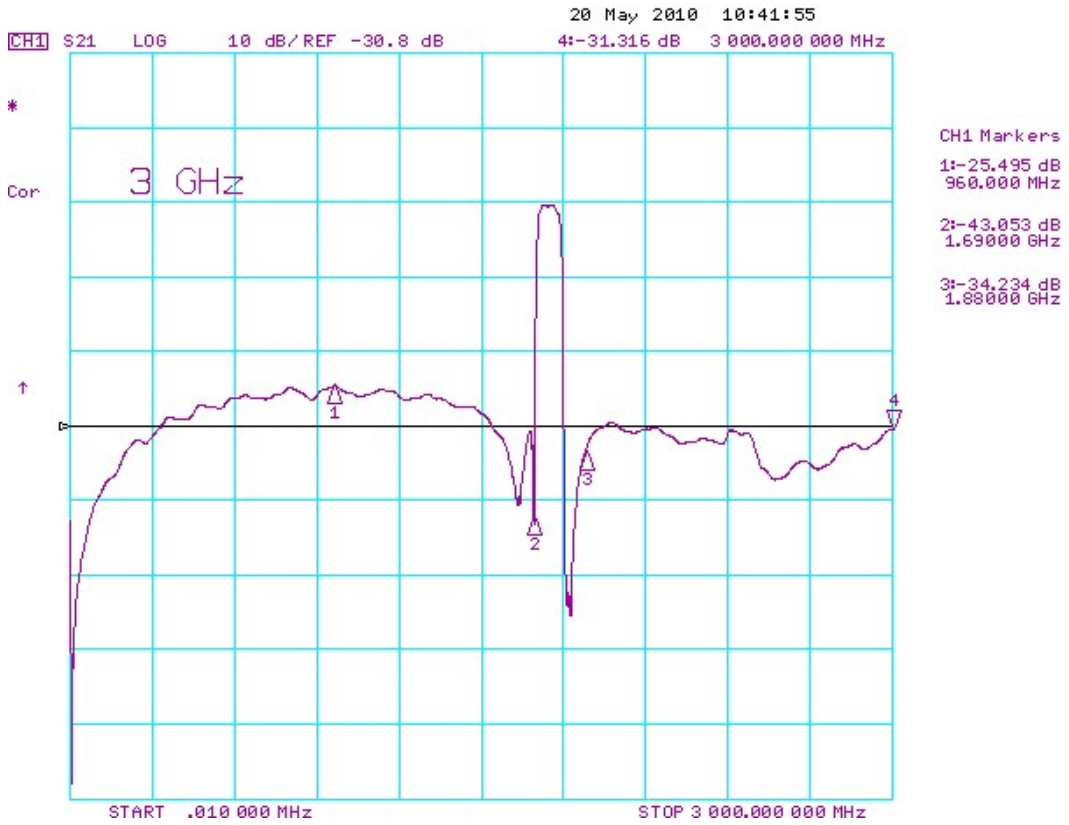
RoHS Compliant **Electrostatic Sensitive Device**

*1: -40℃ *2 : +25℃ *3 : +85℃ *4：+90℃

Typical Frequency Response




20 May 2010 10:35:15
CH1 S21 DEL 20 ns/ REF -11.84 ns
3: 7.1680 ns 1 747.580 000 MHz
CH2 S11 SWR 1 / REF 1
3: 2.0308
1.74758 GHz
CH1 Markers
1: 23.002 ns
1.71000 GHz
2: 23.032 ns
1.78500 GHz
CH2 Markers
1: 1.1788
1.71000 GHz
2: 1.2641
1.78500 GHz
CENTER 1 747.500 000 MHz
SPAN 400.000 000 MHz


20 May 2010 10:41:55
CH1 S21 LOG 10 dB/ REF -30.8 dB
4:-31.316 dB 3 000.000 000 MHz
3 GHz
CH1 Markers
1:-25.495 dB
960.000 MHz
2:-43.053 dB
1.69000 GHz
3:-34.234 dB
1.88000 GHz
START .010 000 MHz
STOP 3 000.000 000 MHz

Stability Characteristics

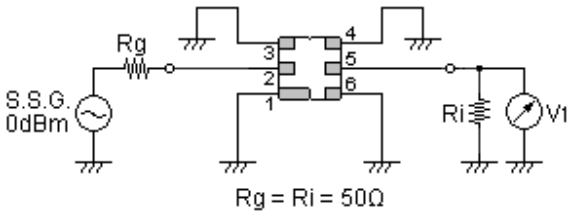
	Test item	Condition of test
1	Mechanical shock	(a) Drops: 3 times on concrete floor (b) Height: 1.0 m
2	Vibration resistance	(a) Frequency of vibration: 10~55Hz (b) Amplitude: 1.5 mm (c) Directions: X,Y and Z (d) Duration: 2 hours
3	Moisture resistance	(a) Condition: 40°C, 90~95% R.H. (b) Duration: 96 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: 70°C (b) Duration: 250 hours (c) Wait 4 hours before measurement
6	Thermal impact	(a) +70°C for 30 minutes ⇒ -25°C for 30 minutes repeated 3 times (b) Wait 4 hours before measurement

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

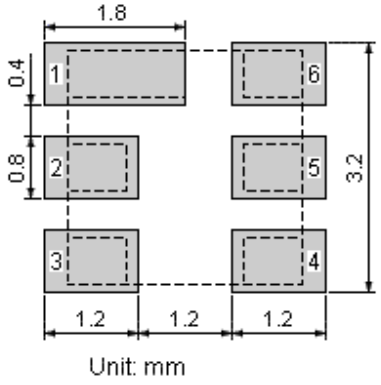
Remarks

- 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

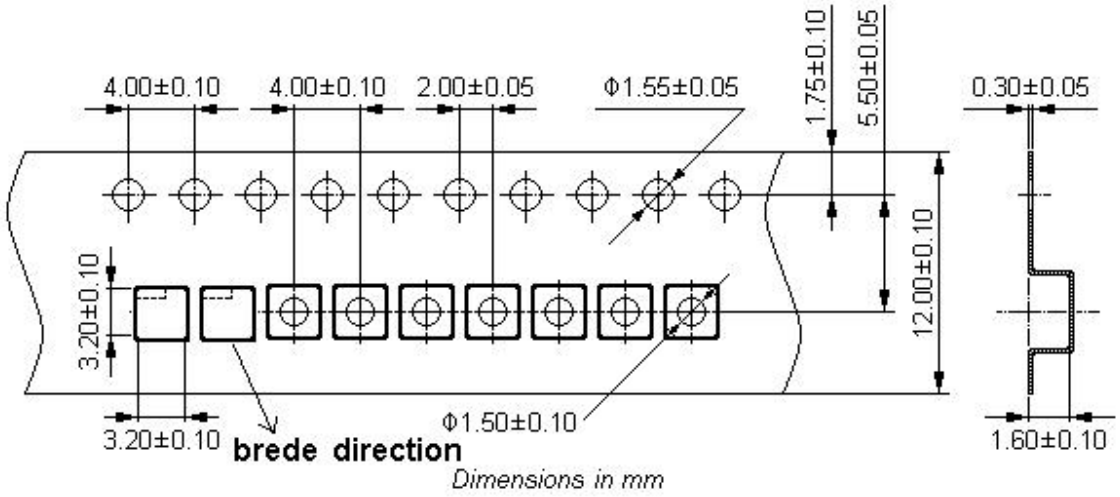


Recommended Land Pattern

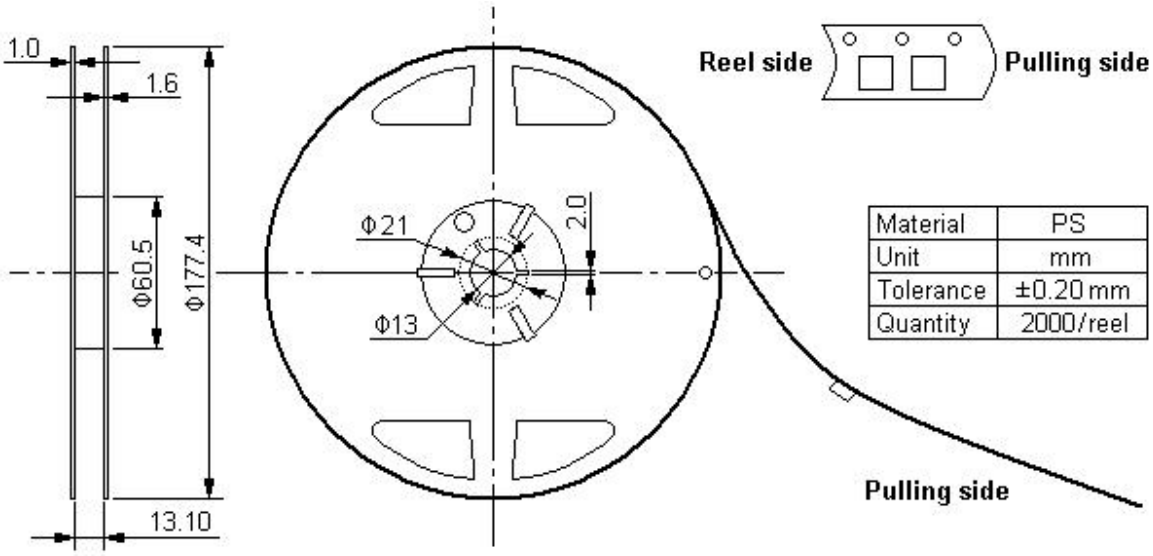


Packing Information

Carrier Tape



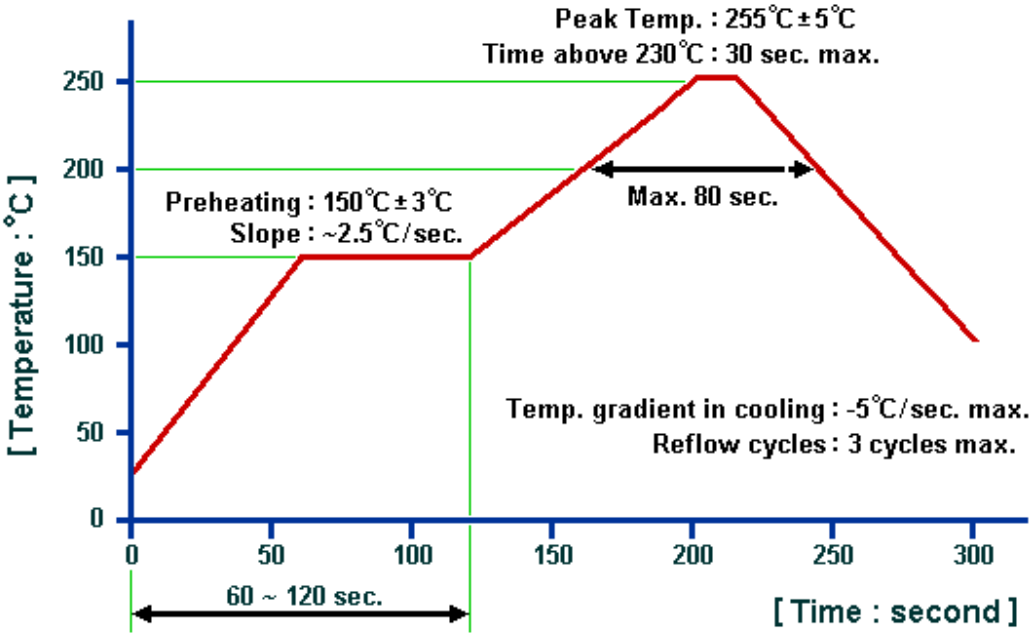
Reel Dimensions



Outer Packing

Type	Quantity	Dimension	Description	Weight
Carton Box Ⅰ	10000	190×190×95	anti-static plastic bag & carton box 1 reel / bag 5 bags / box (10000 pcs) 10 bags / box (20000 pcs)	0.85
Carton Box Ⅱ	20000	190×190×190		1.80
		Unit: mm		Unit: kg

Recommended Soldering Profile



1. The specifications of this device are subject to change or obsolescence without notice.
2. Typically, equipment utilizing this device requires emissions testing and government approval, which is the responsibility of the equipment manufacturer.
3. Our liability is only assumed for the Surface Acoustic Wave (SAW) component(s) per se, not for applications, processes and circuits implemented within components or assemblies.
4. For questions on technology, prices and delivery, please contact our sales offices or e-mail winnsky@winnsky.com