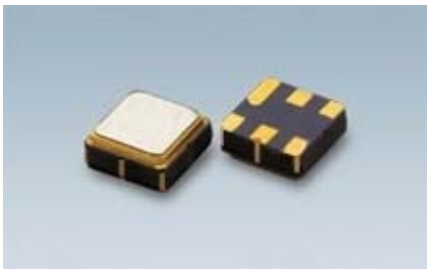
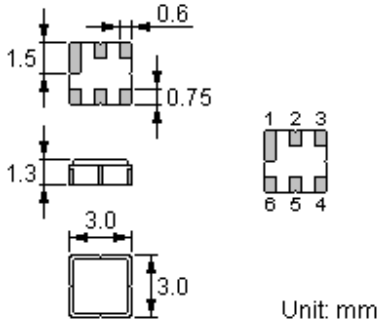
Features

- 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

"8113": 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

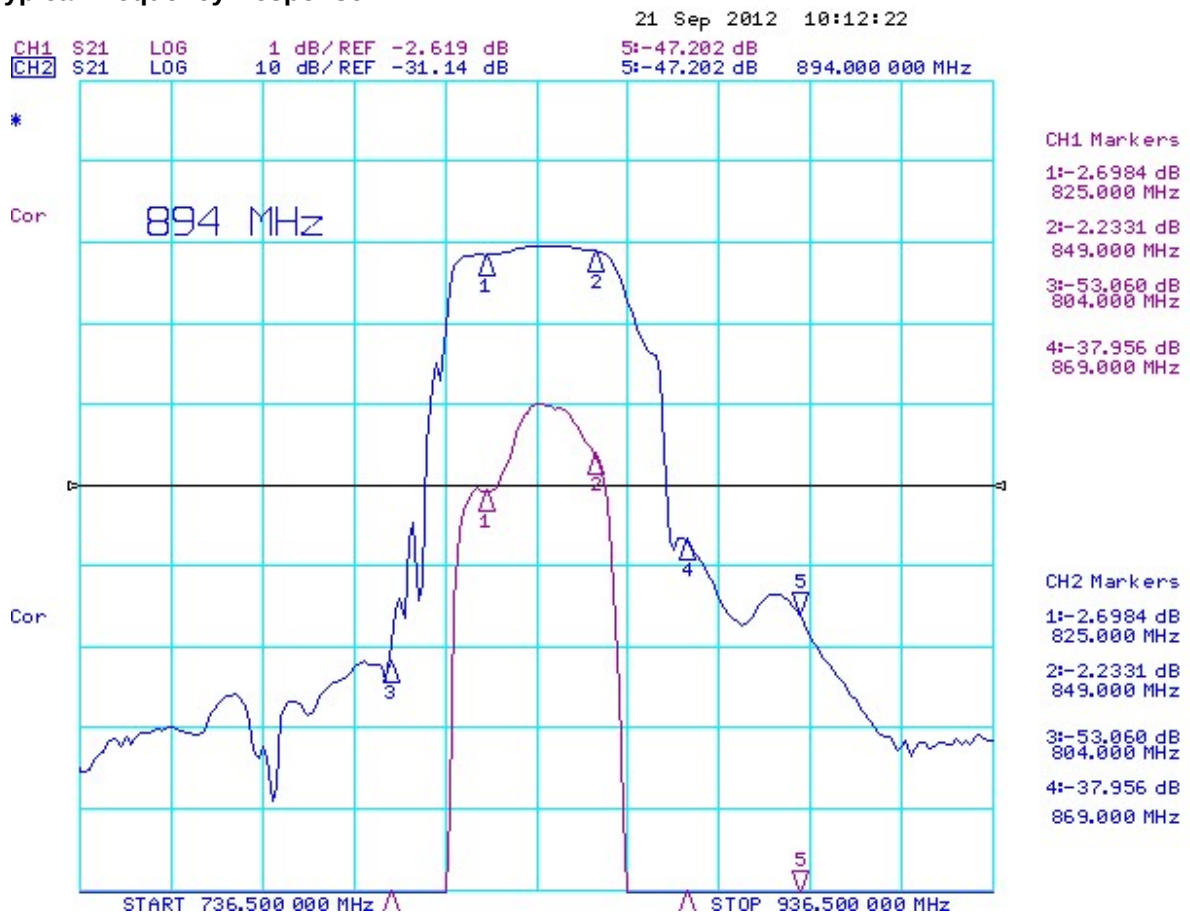
Rating		**Value**	**Unit**
Input Power Level	*P*	23 dBm CW，Ta=85°C，life time>10 years 电气性能满足规格要求	
DC Voltage	V_{DC}	6	V
Operating Temperature Range	T_A	-40 ~ +85	°C
Storage Temperature Range	T_{stg}	-40 ~ +85	°C
ESD-HBM for all pin	E_{SD}	150	V

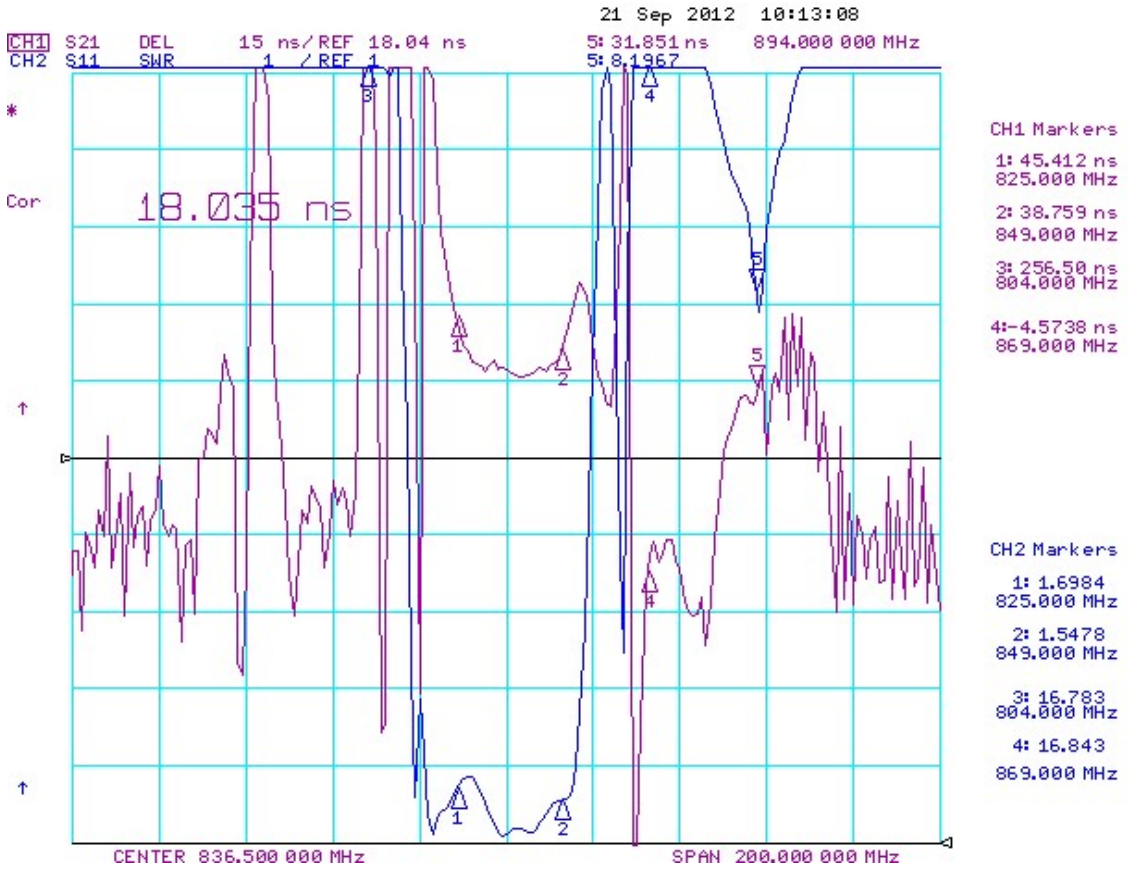
Electrical Characteristics

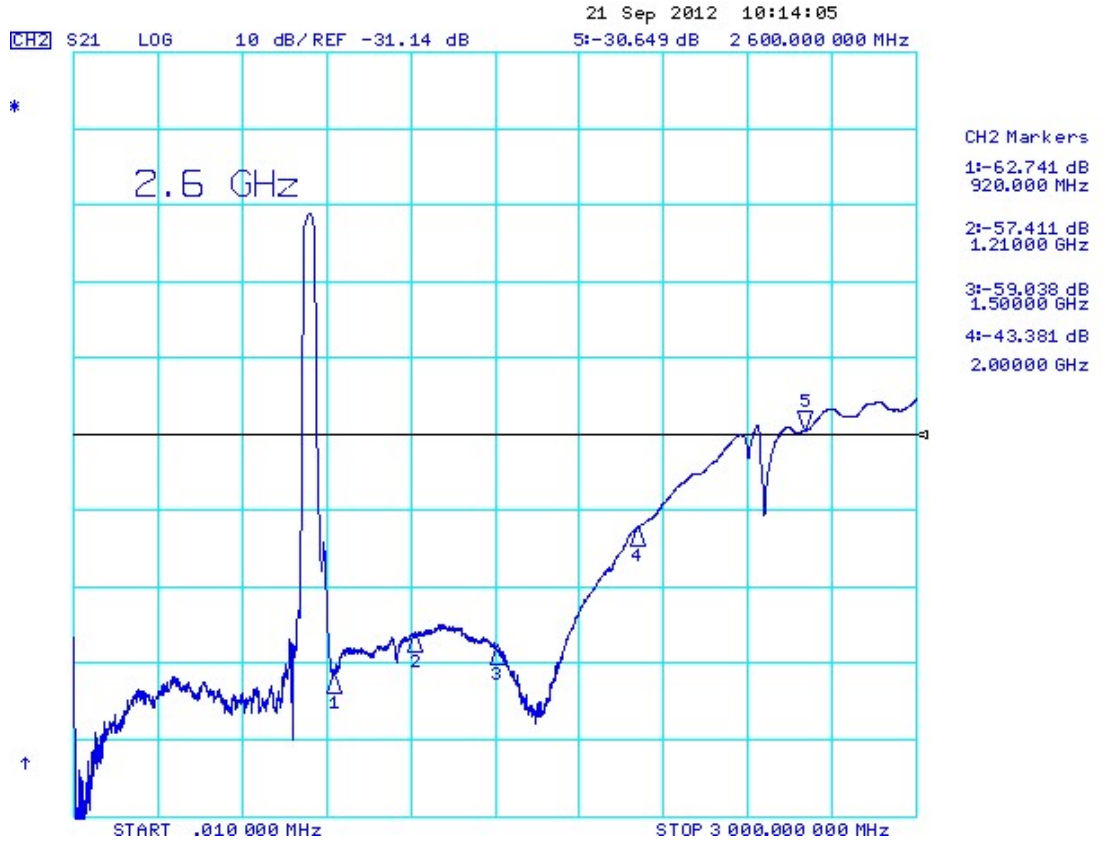
Item		Minimum	Typical	Maximum	Unit
Center Frequency	f_C		836.5		MHz
Insertion Loss	*IL*				
825.00 …. 849.00 MHz		--	3.2	4.0	dB
Group Delay Ripple 825.00 …. 849.00 MHz			12	30	ns
Absolute Attenuation	*α*				
DC …. 804.00 MHz		30	40		dB
869.00 …. 894.00 MHz		32	40		dB
894.00 …. 920.00 MHz		38	45		dB
920.00 …. 1210.00MHz		40	55		dB
1210.00 …. 1500.00 MHz		35	50		dB
1500.00 …. 2000.00 MHz		30	40		dB
2000.00 …. 2600.00 MHz		20	28		dB
2600.00 …. 3000.00 MHz		15	25		dB
Amplitude Ripple (p-p) 825.00 …. 849.00 MHz	*Δα*		1.1	1.5	dB
Intput VSWR 825.00 …. 849.00 MHz			1.9：1	2.0：1	
Output VSWR 825.00 …. 849.00 MHz			1.9：1	2.0：1	
Input / Output Impedance (Nominal)			50		Ω

RoHS Compliant **Electrostatic Sensitive Device**

Typical Frequency Response




21 Sep 2012 10:13:08
CH1 S21 DEL 15 ns/ REF 18.04 ns
CH2 S11 SWR 1 / REF 1
5: 31.851 ns
5: 8.1967
894.000 000 MHz
Cor
18.035 ns
CH1 Markers
1: 45.412 ns
825.000 MHz
2: 38.759 ns
849.000 MHz
3: 256.50 ns
804.000 MHz
4: -4.5738 ns
869.000 MHz
CH2 Markers
1: 1.6984
825.000 MHz
2: 1.5478
849.000 MHz
3: 16.783
804.000 MHz
4: 16.843
869.000 MHz
CENTER 836.500 000 MHz
SPAN 200.000 000 MHz


21 Sep 2012 10:14:05
CH2 S21 LOG 10 dB/ REF -31.14 dB
5: -30.649 dB
2 600.000 000 MHz
2.6 GHz
CH2 Markers
1: -62.741 dB
920.000 MHz
2: -57.411 dB
1.21000 GHz
3: -59.038 dB
1.50000 GHz
4: -43.381 dB
2.00000 GHz
START .010 000 MHz
STOP 3 000.000 000 MHz

Stability Characteristics

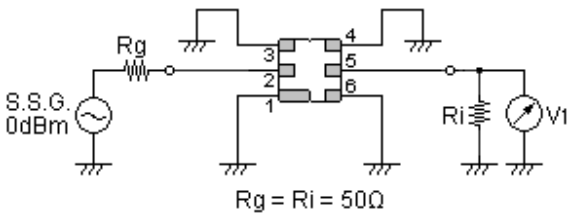
	Test item	Condition of test
1	Mechanical shock	(a) Drops: 3 times on concrete floor (b) Height: 1.0 m
2	Vibration resistance	(a) Frequency of vibration: 10~55Hz (b) Amplitude: 1.5 mm (c) Directions: X,Y and Z (d) Duration: 2 hours
3	Moisture resistance	(a) Condition: 40℃±2℃ , 93^{+2}_{-3}% RH. (b) Duration: 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 (b) Wait 4 hours before measurement

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

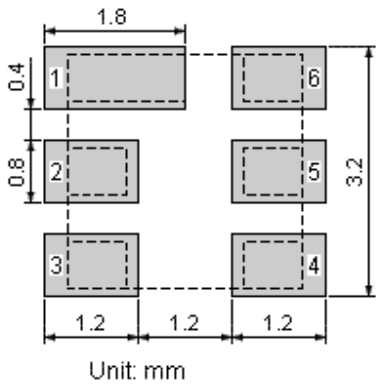
Remarks

- 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

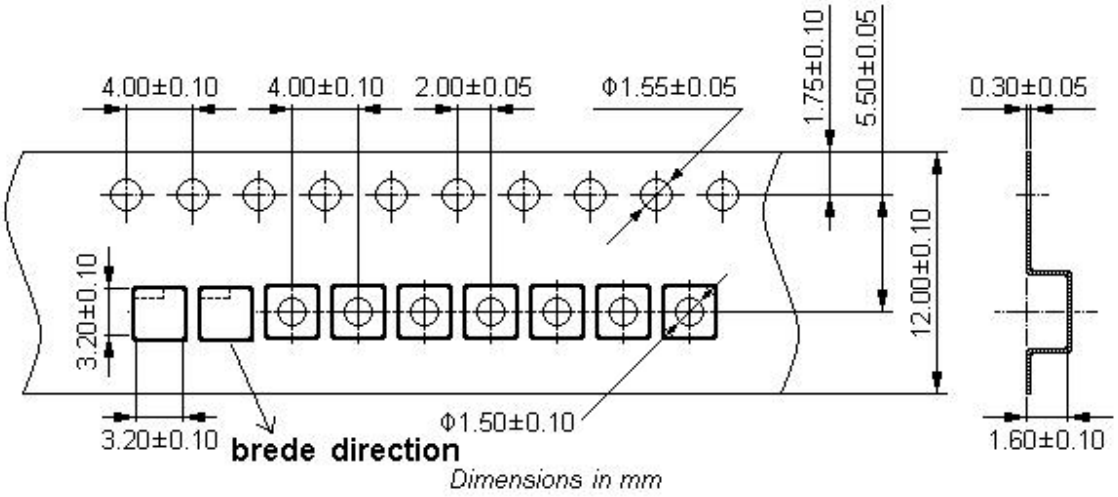


Recommended Land Pattern

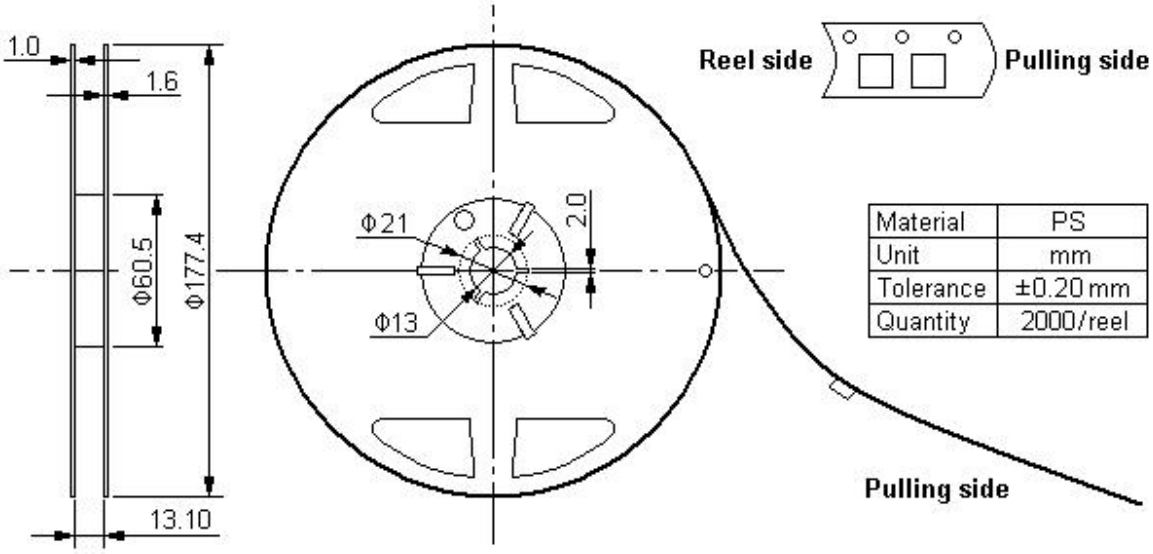


Packing Information

Carrier Tape



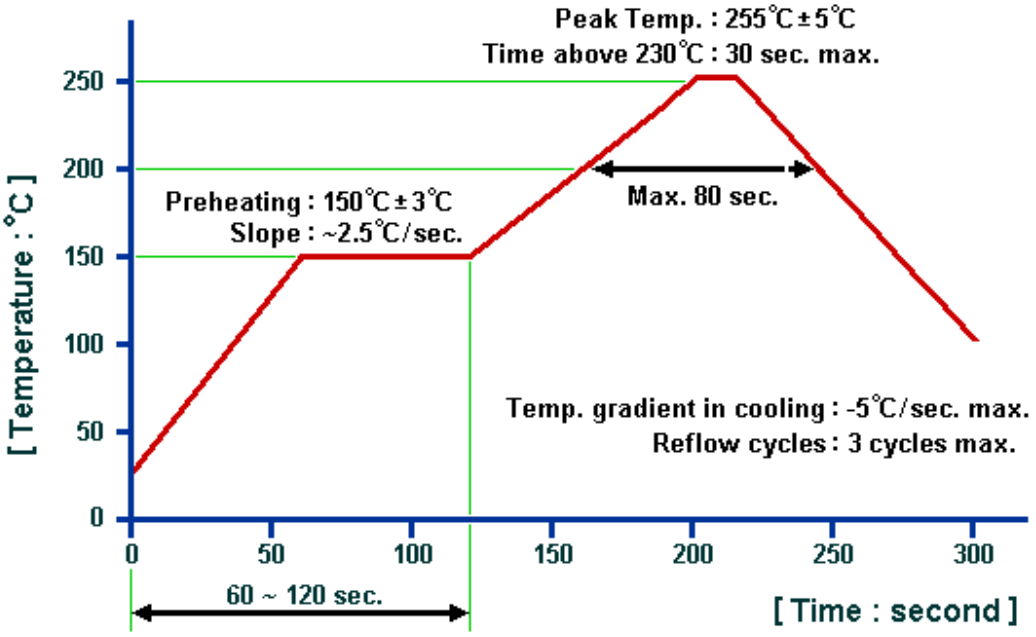
Reel Dimensions



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