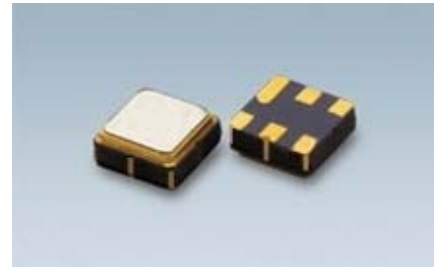


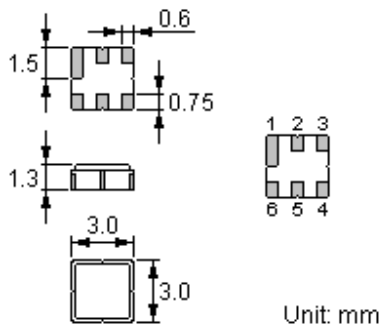
Features

- Low-loss RF filter for mobile systems Band41
- Low amplitude ripple
- No matching network required for operation at 50Ω
- Ceramic package for **Surface Mounted Technology (SMT)**
- Lead-free production and **RoHS** compliant



Package Dimensions

Ceramic Package: **DCC6C**



Pin Configuration

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

Marking



Top View, Laser Marking

- "ND": Manufacturer's mark
- "F": SAW filter
- "9409": 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
2013	A	B	C	D	E	F	G	H	J	K	L	M
2014	N	P	Q	R	S	T	U	V	W	X	Y	Z
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

Maximum Ratings

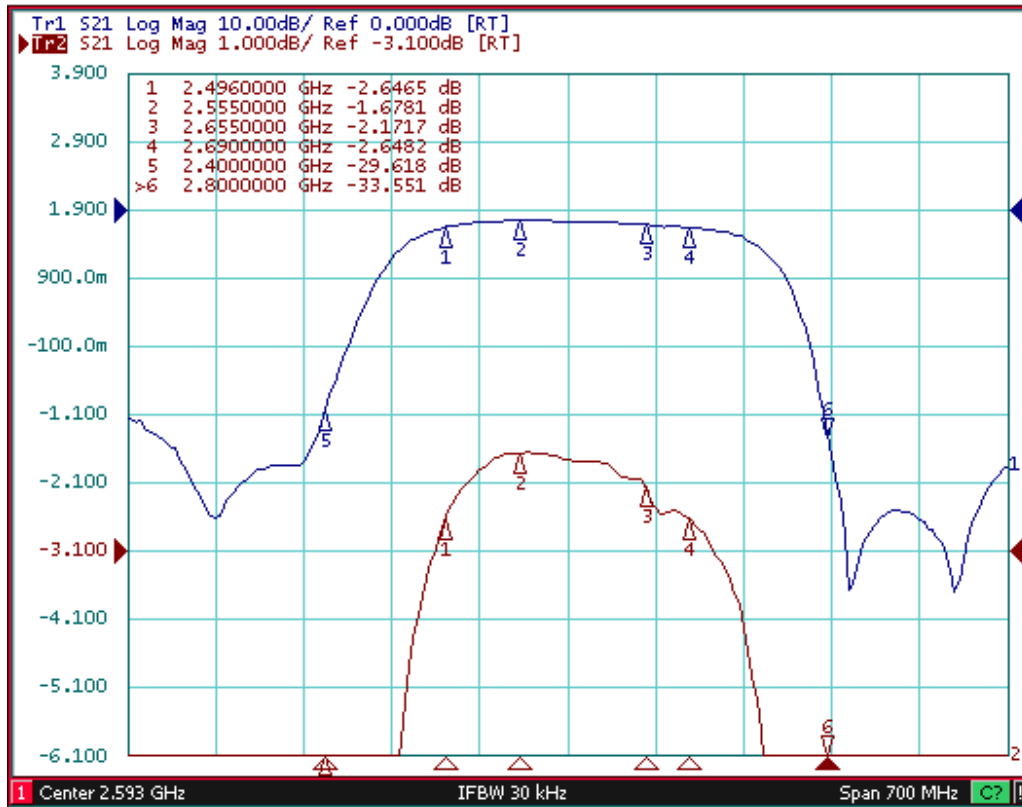
Rating		Value	Unit
Input Power Level	P	13.5dBm CW, $T_a=85^{\circ}\text{C}$, pass band top frequency, test 10years continuously ,electrical characters meet demand;	
		20dBm CW, $T_a=85^{\circ}\text{C}$, pass band top frequency, test 1000 hours continuously ,electrical characters meet demand;	
		23dBm CW, $T_a=85^{\circ}\text{C}$, pass band top frequency, test 2 hours continuously ,electrical characters meet demand;	
DC Voltage	V_{DC}	12	V
Operating Temperature Range	T_A	-40 ~ +85	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-40 ~ +85	$^{\circ}\text{C}$

Electrical Characteristics (-40 — +85 $^{\circ}\text{C}$)

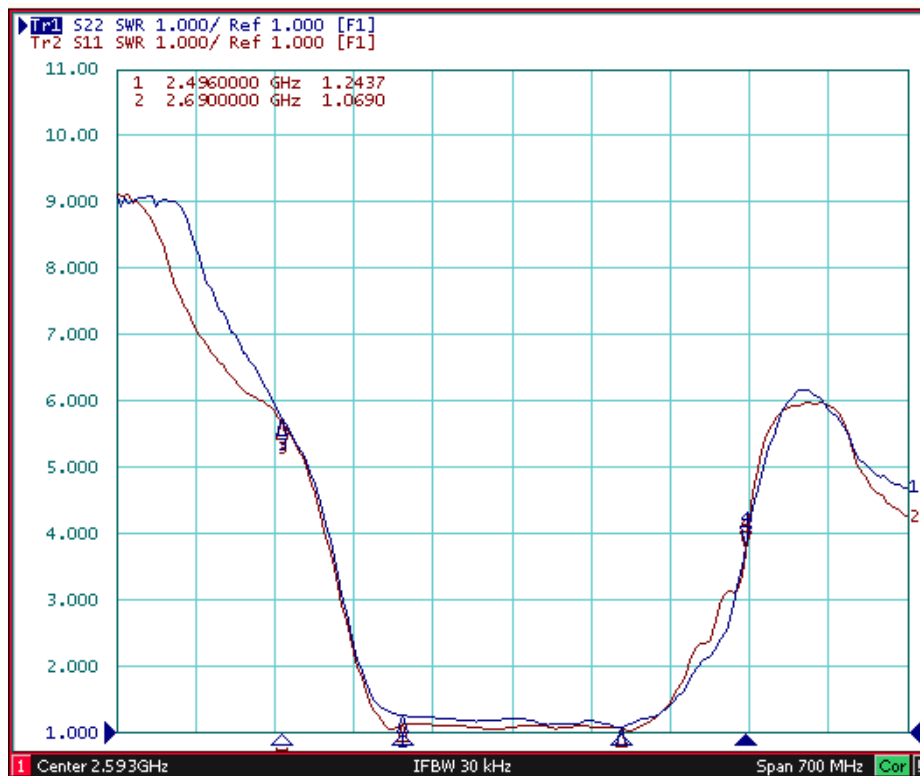
Item	Minimum	Typical	Maximum	Unit
Center Frequency f_c		2593		MHz
Insertion Loss @ 2496.00 2690.00 MHz	--	2.5	3.5	dB
Insertion Loss @ 2555.00 2655.00 MHz	--	2.2	3.0	dB
Amplitude Ripple (p-p) 2496.00 2690.00 MHz $\Delta\alpha$		0.7	2.0	dB
Amplitude Ripple (p-p) 2555.00 2655.00 MHz $\Delta\alpha$		0.5	1.0	dB
Group Delay Ripple 2496.00 2690.00 MHz		3	7	ns
Absolute Attenuation α				
DC 2000.00 MHz	15	22		dB
2000.00 2300.00 MHz	20	25		dB
2300.00 2400.00 MHz	10	25		dB
2800.00 3000.00 MHz	15	25		dB
3000.00 3500.00 MHz	20	30		dB
VSWR 2496.00 2690.00 MHz		1.2	2.0	
VSWR 2555.00 2655.00 MHz		1.2	1.6	
Input / Output Impedance (Nominal)		50		Ω

 **RoHS Compliant**
 **Electrostatic Sensitive Device**

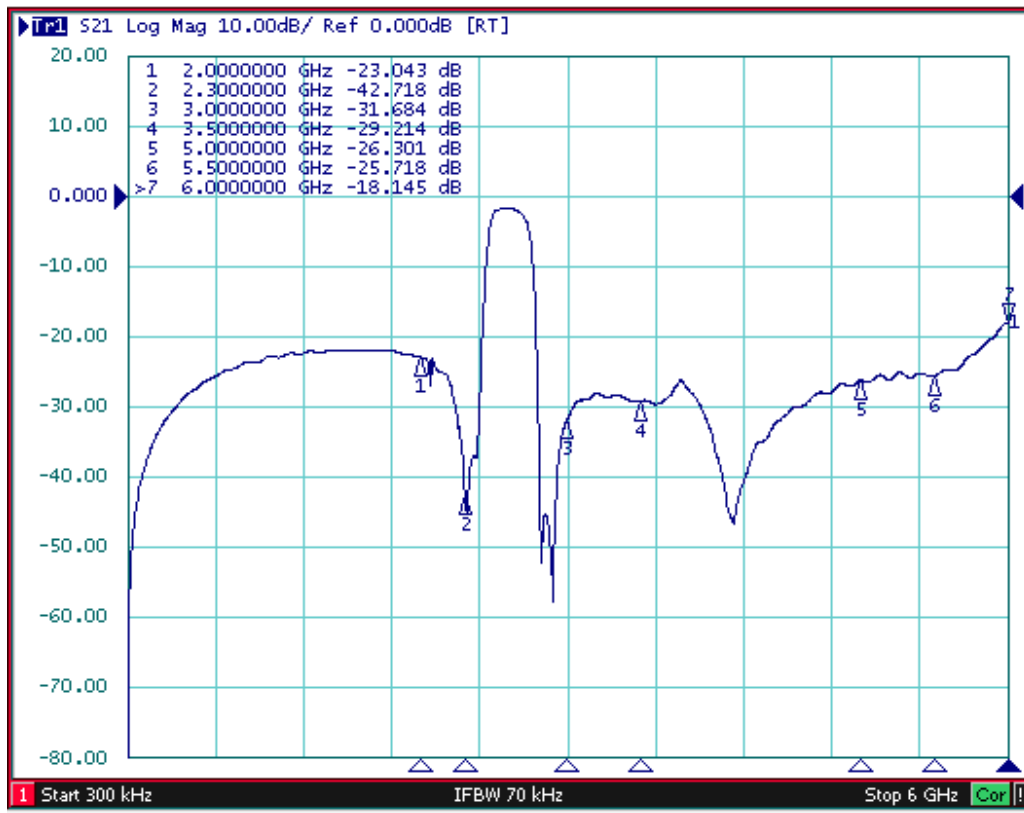
Typical Frequency Response
S21



S11 and S22



S21 Far Side



Stability Characteristics

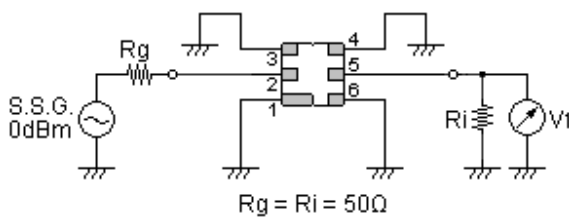
	Test item	Condition of test
1	Mechanical shock	(a) Drops: 3 times on concrete floor (b) Height: 1.0 m
2	Vibration resistance	(a) Frequency of vibration: 10~55Hz (b) Amplitude: 1.5 mm (c) Directions: X,Y and Z (d) Duration: 2 hours
3	Moisture resistance	(a) Condition: 40°C ± 2°C, 93 ⁺² / ₋₃ % RH. (b)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

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

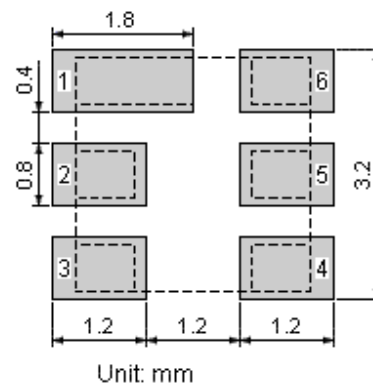
Remarks

- 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

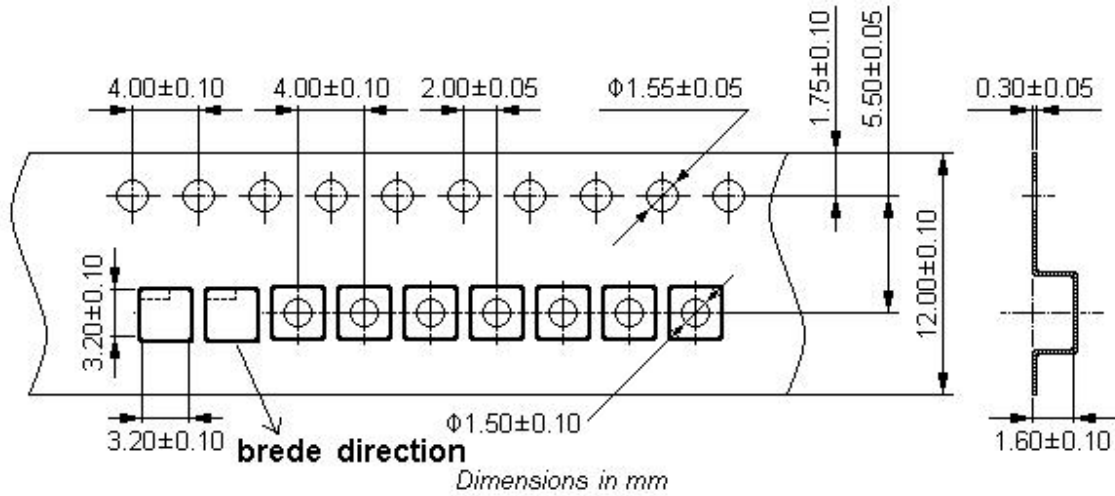


Recommended Land Pattern

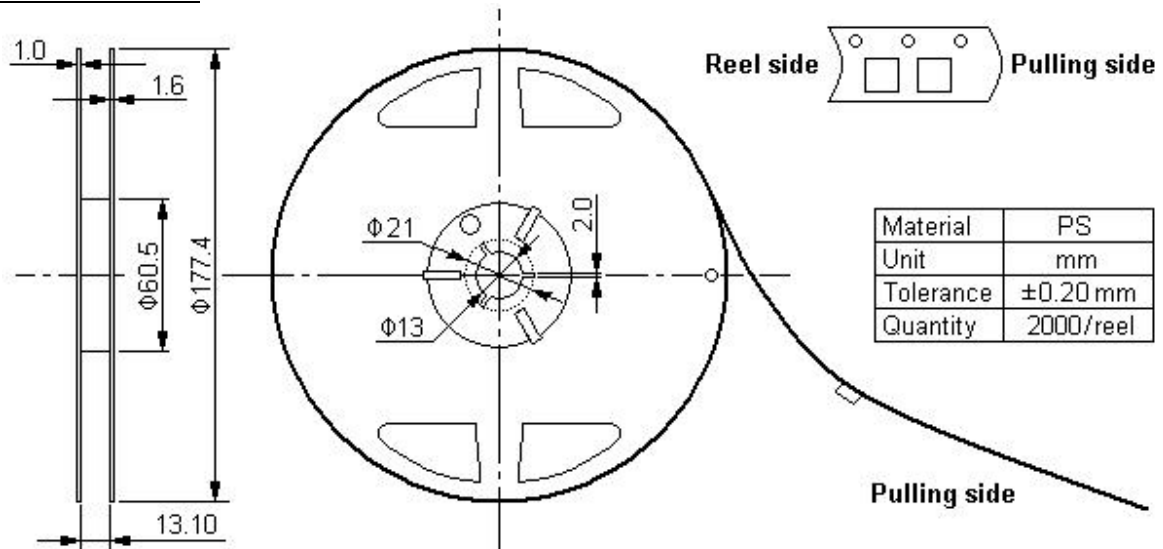


Packing Information

Carrier Tape



Reel Dimensions



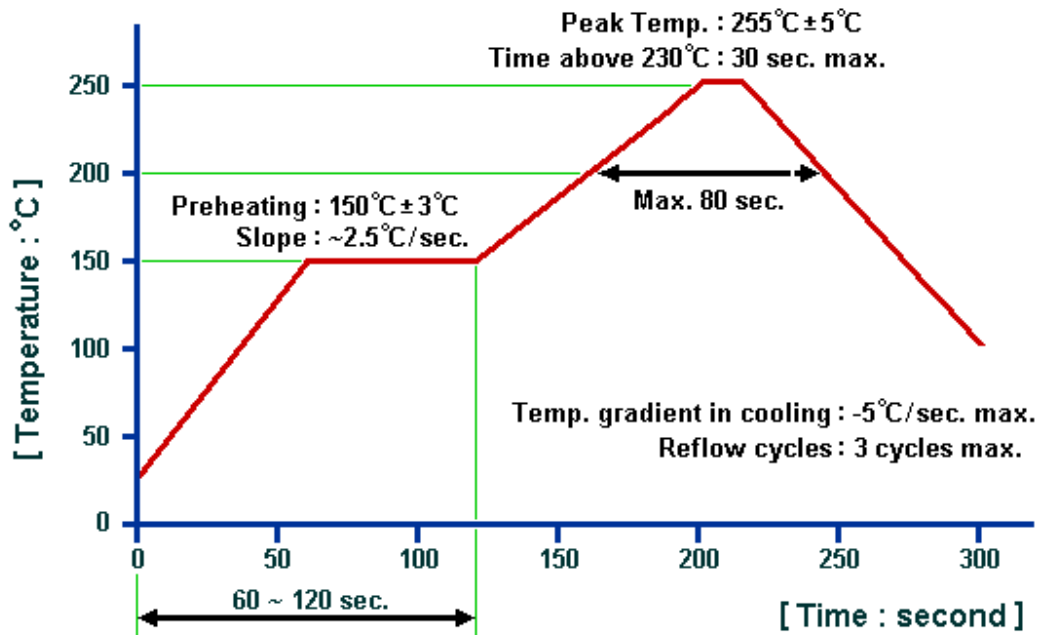
Outer Packing

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

Unit: mm

Unit: kg

Recommended Soldering Profile



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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