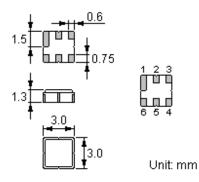


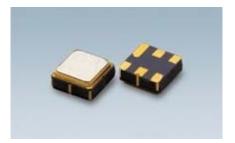
#### Features

- Low-loss RF filter for mobile systems
- 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

\- <u>`</u>	NDF *
•	9338
Ļ	

Top View, Laser Marking

"ND":	Manufacturer's mark	" <b>F</b> ":	SAW filter
" <b>9338</b> ":	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
2011	а	b	С	d	е	f	g	h	i	j	k	m
2012	n	р	q	r	S	t	u	v	w	х	у	z
2013	Α	В	С	D	Е	F	G	Н	J	K	L	М
2014	N	Р	Q	R	S	Т	U	V	W	Х	Y	Z

#### Maximum Ratings

Rating	Value	Unit	
Input Power Level	Р	15dBm	dBm
DC Voltage	V <sub>DC</sub>	9	V
Operating Temperature Range	TA	-40 ~ +85	°C
Storage Temperature Range	$T_{\rm stg}$	-40 ~ +85	°C
ESD-HBM for all pin	E <sub>SD</sub>	150	V

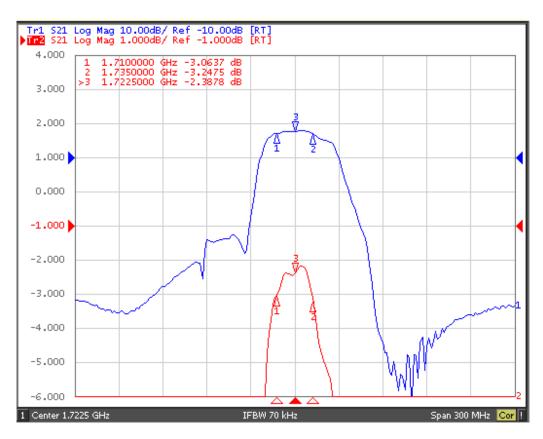


#### **Electrical Characteristics**

ltem	Minimum	Typical	Maximum	Unit	
Center Frequency	f <sub>C</sub>		1722.5		MHz
Insertion Loss	IL				
1710MHz1735 MHz			3.0	3.5	dB
Source Impedance(single ended) <sup>(1)</sup>			50		Ω
Load Impedance (single ended) <sup>(1)</sup>			50		Ω
Absolute Attenuation	α				
0.1 1500 MHz		20	25		dB
1500 1690 MHz		15	20		dB
1755 1770 MHz		15	20		dB
1770 1805MHz		20	25		dB
1805 2400 MHz		25	30		dB
3420 3570 MHz		20	25		dB
Amplitude Ripple (p-p) in 1710MHz 1735 MHz	Δα		0.9	2	dB
VSWR in 1710MHz 1735 MHz			2.0	2.5	
Input / Output Impedance (Nominal)		50	·	Ω	
B Dalle Compliant			Constitute	Daviaa	•

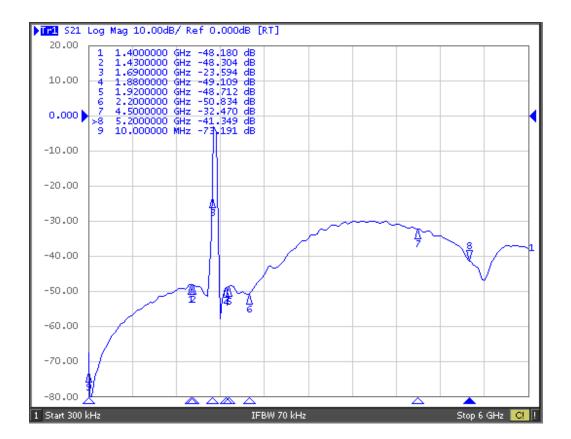
🕲 RoHS Compliant 🕕 Electrostatic Sensitive Device

## **Typical Frequency Response**









## **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: $40^{\circ}C \pm 2^{\circ}C$ , $93^{+2}_{\cdot3}$ % RH. (b) Duration: 96 hours (c) Wait 4 hours before measurement				
4	Climatic sequence	(a) $+70^{\circ}$ C for 16 hours (b) $+55^{\circ}$ C for 24 hours, 90~95% R.H. (c) $-25^{\circ}$ C for 2 hours (d) $+40^{\circ}$ 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 $\Rightarrow$ -40°C for 30 minutes repeated 120 times (b) Wait 4 hours before measurement				

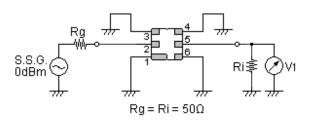
Requirements: The SAW filer shall remain within the electrical specifications after tests.



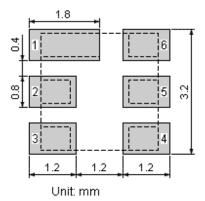
#### Remarks

- 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**



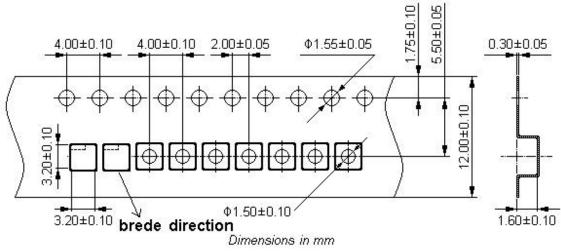
## **Recommended Land Pattern**



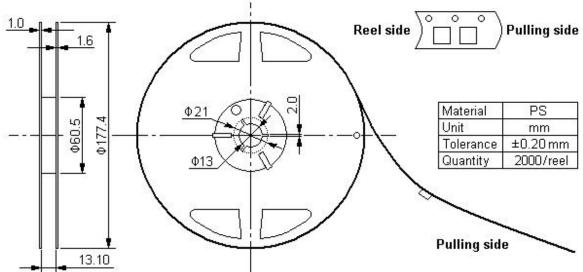


# **Packing Information**

# Carrier Tape







## Outer Packing

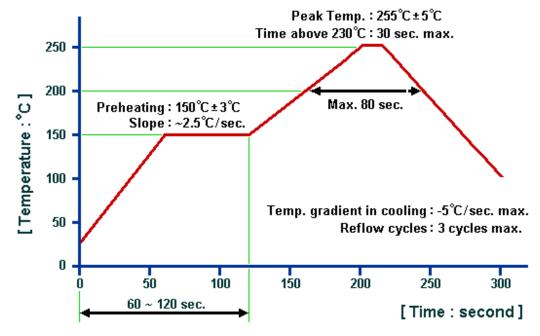
Туре	Quantity	Dimension	Description	Weight
Carton Box I	10000	190×190×95	anti-static plastic bag & carton box 1 reel / bag	0.85
Carton Box II	20000	190×190×190	5 bags / box (10000 pcs) 10 bags / box (20000 pcs)	1.80
	•	Linit: mm		L Init: ka

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

WINNSKY INTERNATIONAL (H.K.) LIMITED