Application

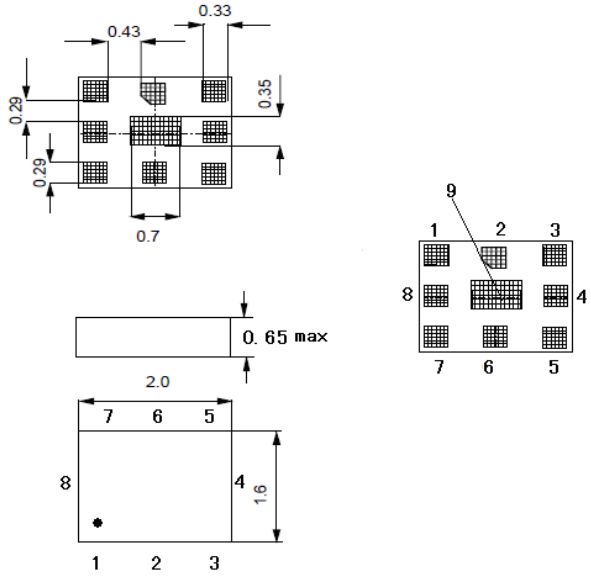
- Low-loss SAW duplexer for mobile telephone
  Cellular/WCDMA band 5 systems
- Low amplitude ripple
- Low insertion attenuation

Features

- Ceramic Package for **S**urface **M**ounted **T**echnology (**SMT**)
- **RoHS** compatible
- Package size 2.0x1.6
- Approx. weight 0.014g
- **E**lectrostatic **S**ensitive **D**evice(**ESD)**

Package Dimensions

Ceramic Package: Unit：mm

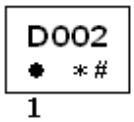


Pin Configuration

6	Antenna
3	TX Input
1,8	RX Output
2, 4 ,5, 7, 9	To Be Grounded

Marking

Top View, Laser Marking



"**D002**": Part number "・": Terminal 1

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

"#": Week Code (showing as 1,2,3 or 4)

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
Operating Temperature Range	T_A	-30 ~ +85	°C
Storage Temperature Range	T_{stg}	-40 ~ +85	°C
DC Voltage (between any Terminals)	V_{DC}	5	V
RF Power (in *BW*)	*P*	30 max	dBm
ESD Voltage （HB）	V_{ESD}	250	V

Electrical Characteristics TX-ANT:

Temperature range for specification: T=-30°C to +85°C

Antenna terminating impedance: Z_{ANT}=50Ω｜｜7.5nH

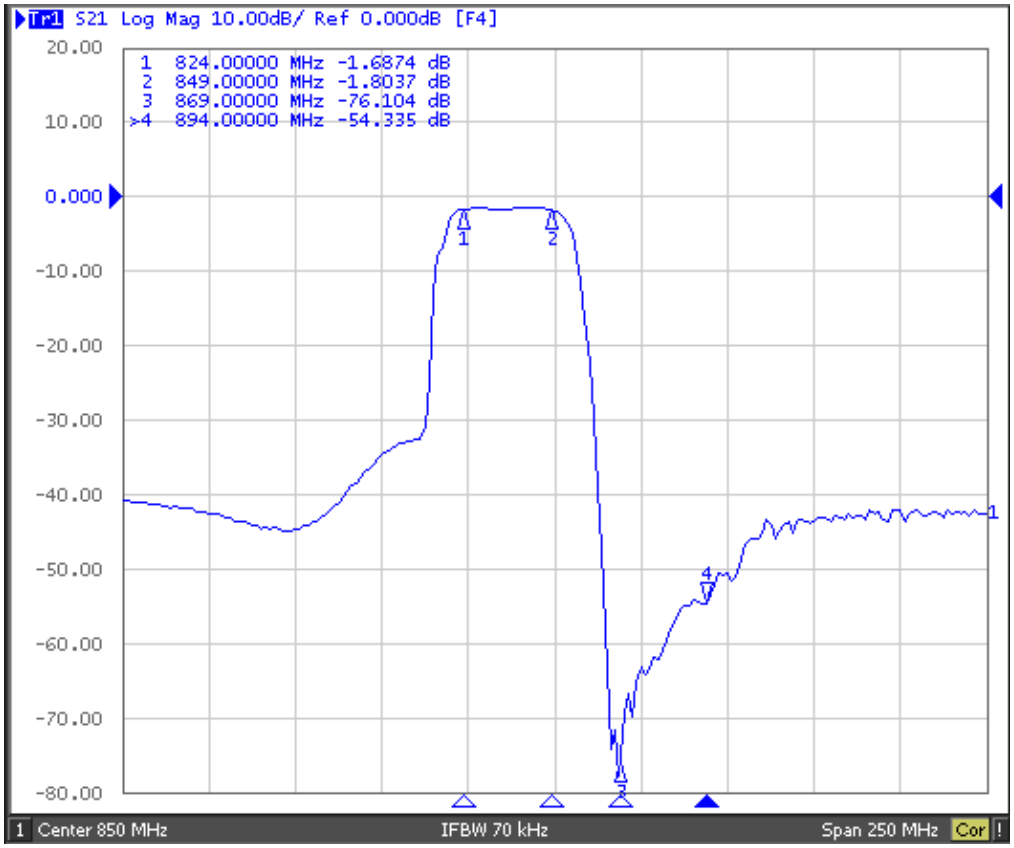
RX terminating impedance: Z_{RX}=100Ω (balanced)

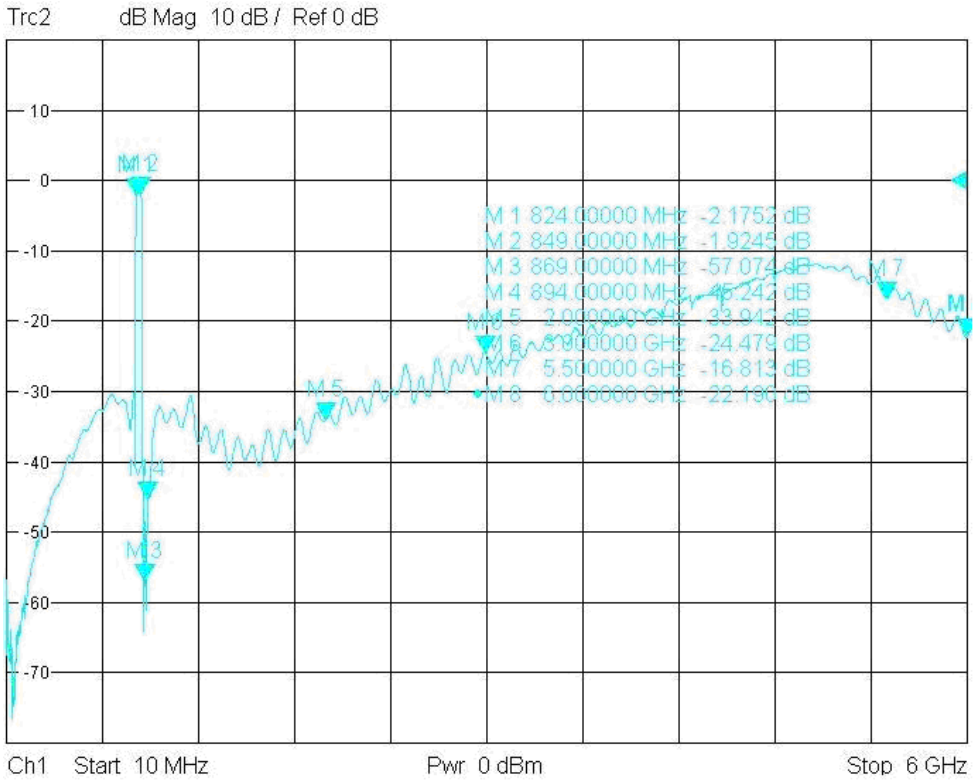
TX terminating impedance: Z_{TX}=50Ω

Item		Minimum	Typical	Maximum	Unit
Center Frequency	f_C	-	836.5	-	MHz
Maximum Insertion Loss in 824.0 MHz–849.0MHz	*IL*	-	1.8	2.3	dB
Amplitude Variation in 824.0 MHz–849.0MHz			0.6	1.0	dB
Absolute Attenuation	*α*				
0.30 … 779.0MHz		25	33	-	dB
779.0 … 804.0 MHz		27	29	-	dB
869.0 … 894.0 MHz		47	54	-	dB
1573.0 … 1578.0MHz		36	43	-	dB
1648.0 … 1698.0 MHz		35	39	--	dB
2472.0 … 2547.0 MHz		23	26	--	dB
3296.0 … 3396.0 MHz		10	18	--	dB
Input VSWR(**TX port**) in 824.0 MHz–849.0MHz		-	1.9:1	2.1:1	
Output VSWR(**ANT port**) in 824.0 MHz–849.0MHz		-	1.6:1	2.0:1	

RoHS Compliant **Electrostatic Sensitive Device**

Typical Frequency Response TX-ANT





Electrical Characteristics ANT- RX-:

Temperature range for specification: T=-30°C to +85°C

Antenna terminating impedance: Z_{ANT}=50Ω||7.5nH

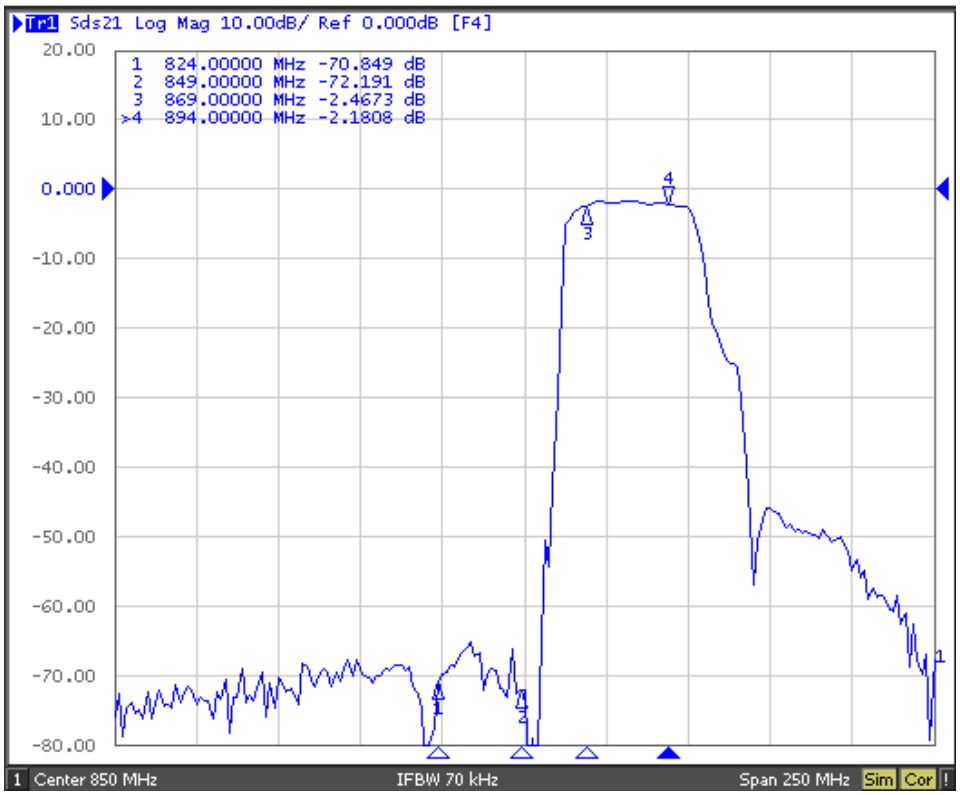
RX terminating impedance: Z_{RX}=100Ω (balanced)

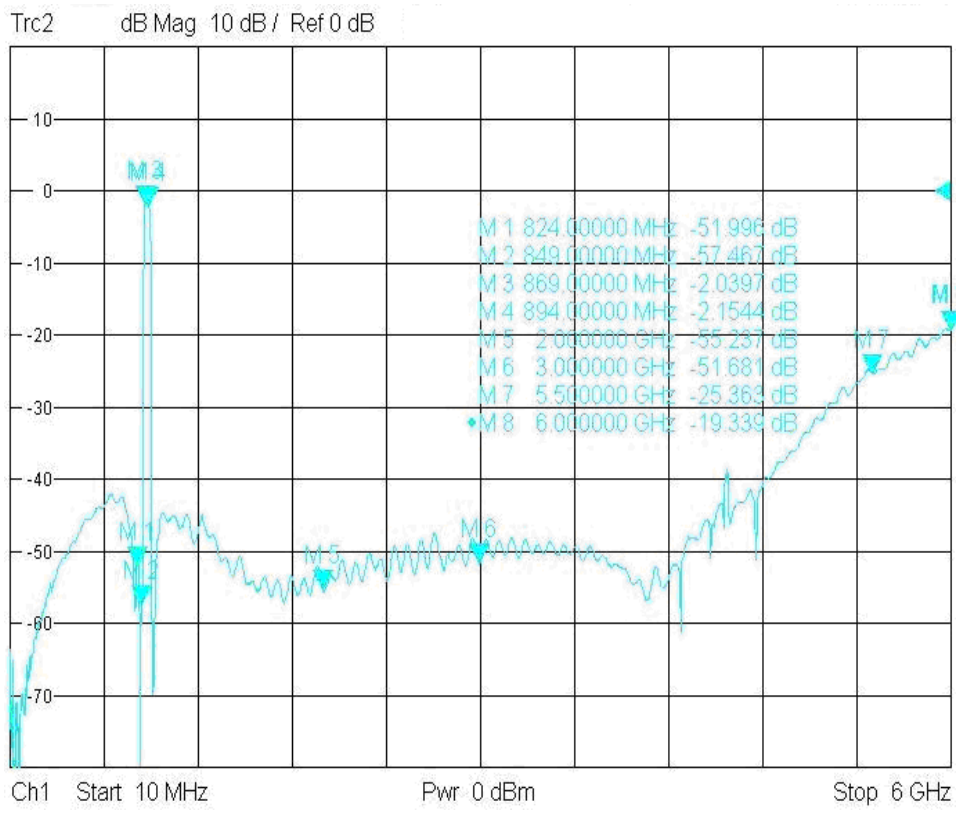
TX terminating impedance: Z_{TX}=50Ω

Item		Minimum	Typical	Maximum	Unit
Center Frequency	f_C	-	881.5	-	MHz
Maximum Insertion Loss in 869.0 MHz–894.0MHz	*IL*	-	2.0	2.8	dB
Amplitude Variation in 869.0 MHz–894.0MHz			1.0	1.5	dB
Absolute Attenuation	*α*				
0.30 … 779.0MHz		35	47	-	dB
779.0 … 804.0 MHz		38	52	-	dB
824.0 … 849.0 MHz		52	65	-	dB
1738.0 … 1788.0MHz		40	57	-	dB
2400.0 … 2500.0 MHz		40	56	--	dB
2607.0 … 2682.0 MHz		35	45	--	dB
3476.0 … 3576.0 MHz		30	42	--	dB
Input VSWR(**ANT port**) in 869.0 MHz–894.0MHz		-	1.6:1	2.0:1	
Output VSWR(**RX port**) in 869.0 MHz–894.0MHz		-	1.7:1	2.0:1	

RoHS Compliant **Electrostatic Sensitive Device**

Typical Frequency Response ANT- RX



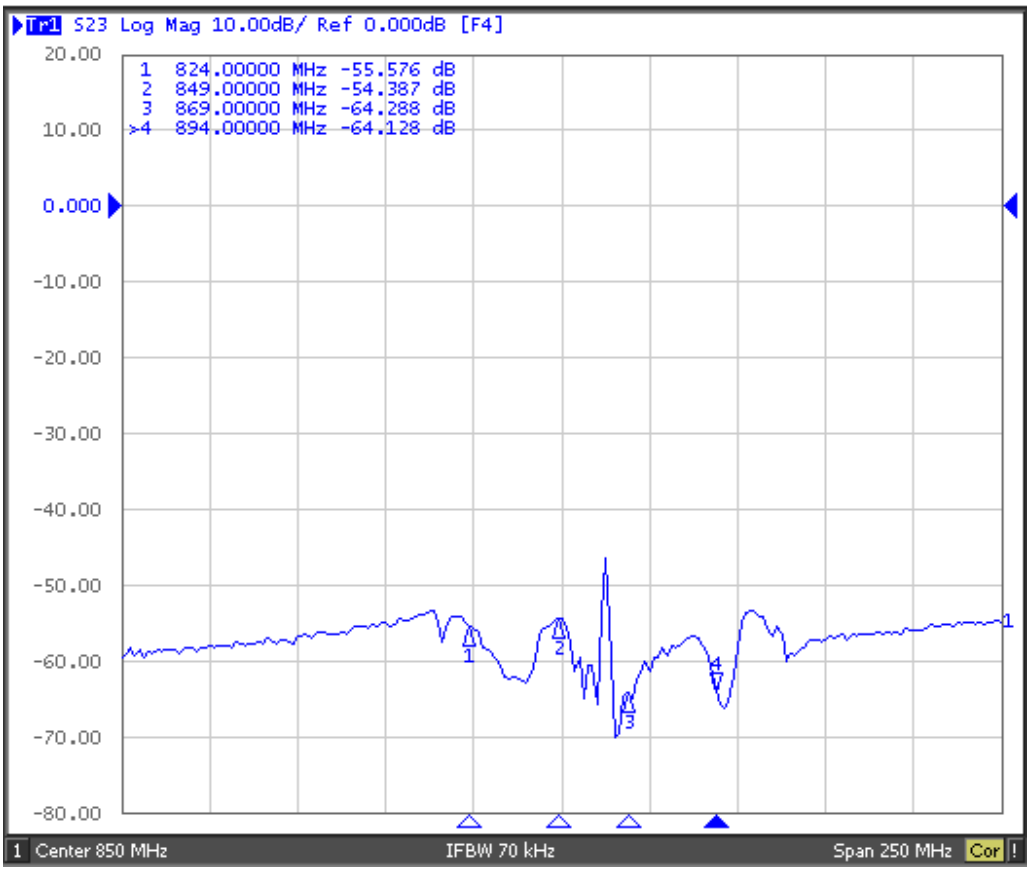


Electrical Characteristics TX-RX:

Item		Minimum	Typical	Maximum	Unit
Isolation		-		-	
824.0 MHz–849.0MHz	*IL*	52	55		dB
869.0 MHz–894.0MHz		50	53		dB

RoHS Compliant **Electrostatic Sensitive Device**

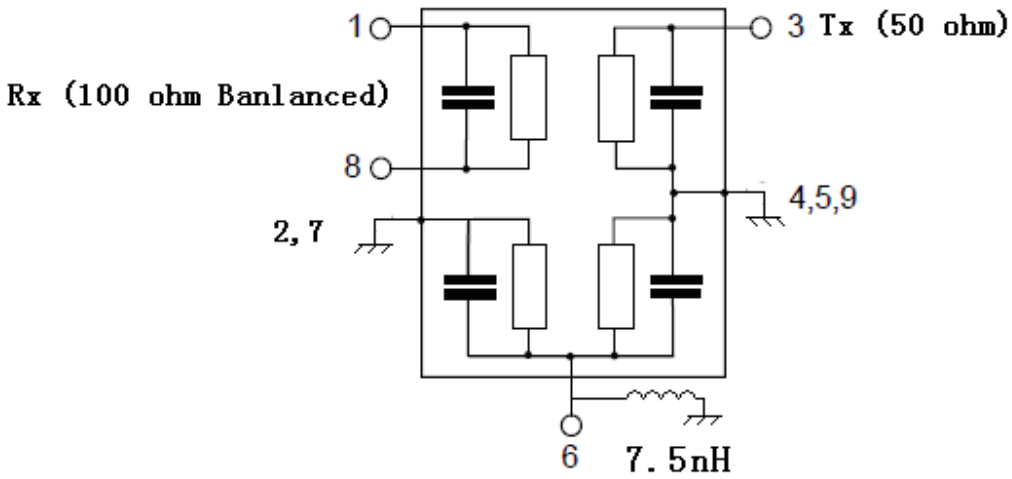
Typical Frequency Response TX-RX



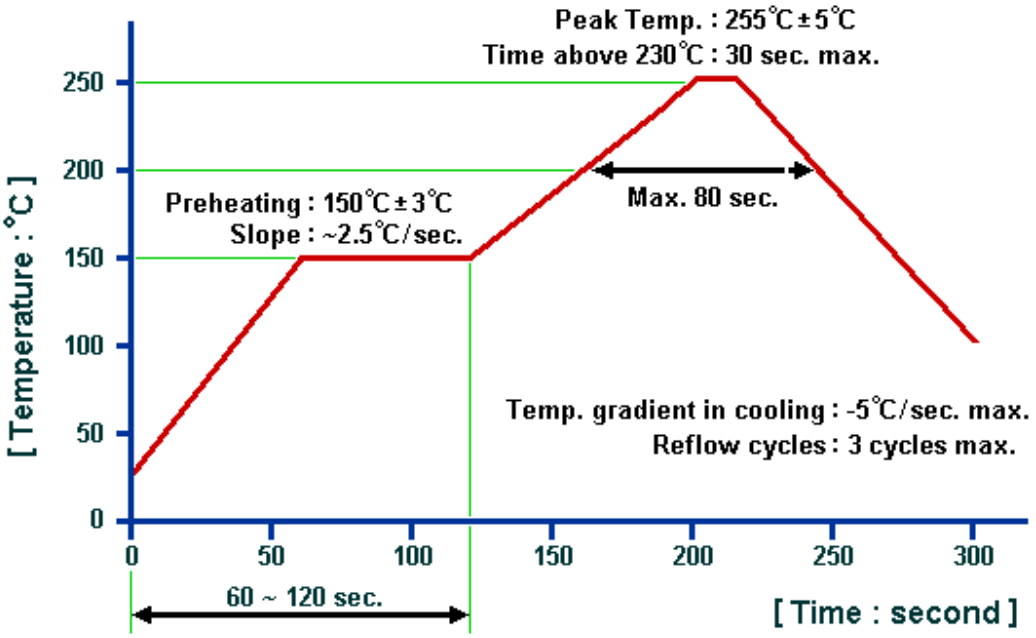
Remarks

- 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



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

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