Features

- TD-LTE band 41(2535-2655MHz) Tx filter
- Low – loss RF filter for mobile telephone
- Narrow Band 41systems
- Usable pass band 120MHz(1 10MHz included)
- 50 Ω/50 Ωunbalanced to unbalanced operation for all filters
- Low insertion attenuation
- Package size 1. 1mm*0.9mm
- RoHS compatible

Electrical Specification

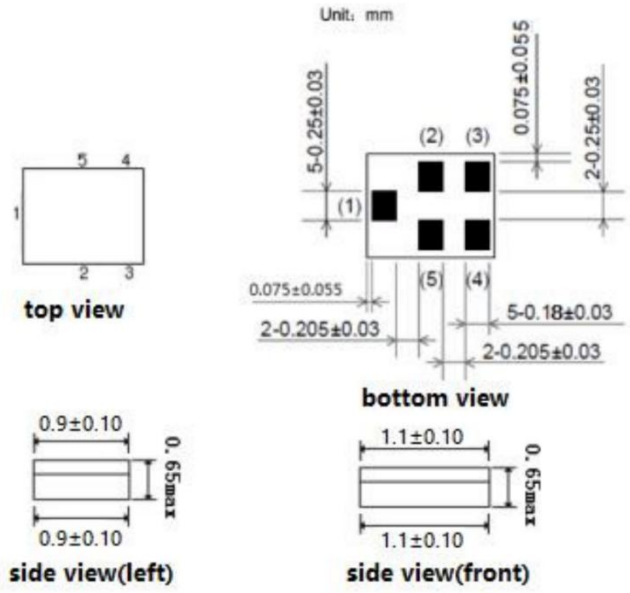
ITEM		Min.	Typ.	Max.	Unit
Center Frequency			2590		MHz
Insertion Loss	2535 ~ 2545 MHz		2.1	3.3	dB
Insertion Loss	2545 ~ 2575 MHz		1.4	2.2	dB
Insertion Loss	2555 ~ 2655 MHz		2.1	2.7	dB
Insertion Loss	2575 ~ 2635 MHz		1.4	2.2	dB
Insertion Loss	2635 ~ 2655 MHz		2.1	3.3	dB
Passband Ripple	2535 ~ 2655 MHz		1.2	2.4	dB
VSWR	2535 ~ 2655 MHz		1.4	2.0	
Attenuation	50~ 699 MHz	45	50		dB
Attenuation	699~ 916 MHz	38	42		dB
Attenuation	916~ 925 MHz	38	42		dB
Attenuation	925~ 960 MHz	37	41		dB
Attenuation	960~ 1440 MHz	28	32		dB
Attenuation	1440~ 1565MHz	28	31		dB
Attenuation	1565~ 1615 MHz	28	31		dB
Attenuation	1615~ 1805 MHz	28	31		dB
Attenuation	1805~ 1830 MHz	28	31		dB
Attenuation	1830~ 2120 MHz	28	31		dB
Attenuation	2120~ 2400 MHz	30	34		dB
Attenuation	2400~ 2500 MHz	35	38		dB
Attenuation	2775~ 4990 MHz	27	33		dB
Attenuation	4990~5900 MHz	25	30		dB
Attenuation	6000~ 6900 MHz	23	29		dB
Attenuation	7000~7990 MHz	15	25		dB

Maximum Ratings

Rating	Symbol	Value	Unit
DC Voltage (between any Terminals)	V_{DC}	5	V
Input power at 2545-2655MHz	P	29 dBm /5000hrs@55°C	
Input power for other frequency ranges		10 dBm /5000hrs@55°C	
Operating Temperature Range	T_A	-40 ~ +85	°C
Storage Temperature Range	Tstg	-40 ~ +85	°C
ESD voltage(Machine Model)	V_{ESD}	50	V
ESD voltage(Human Body Model)	V_{ESD}	125	V
ESD voltage(Changed Device Model)	V_{ESD}	600	V

Outline Drawing

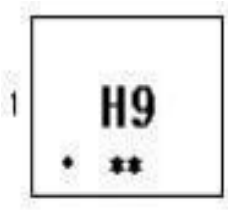
Unit: mm



Pin Configuration

PIN#	Description
1	Input
4	Output
2,3,5	Ground

Marking



Top View, Laser Marking

"H9": Part Number
"." Dot marking, indicates input

"1": Terminal 1

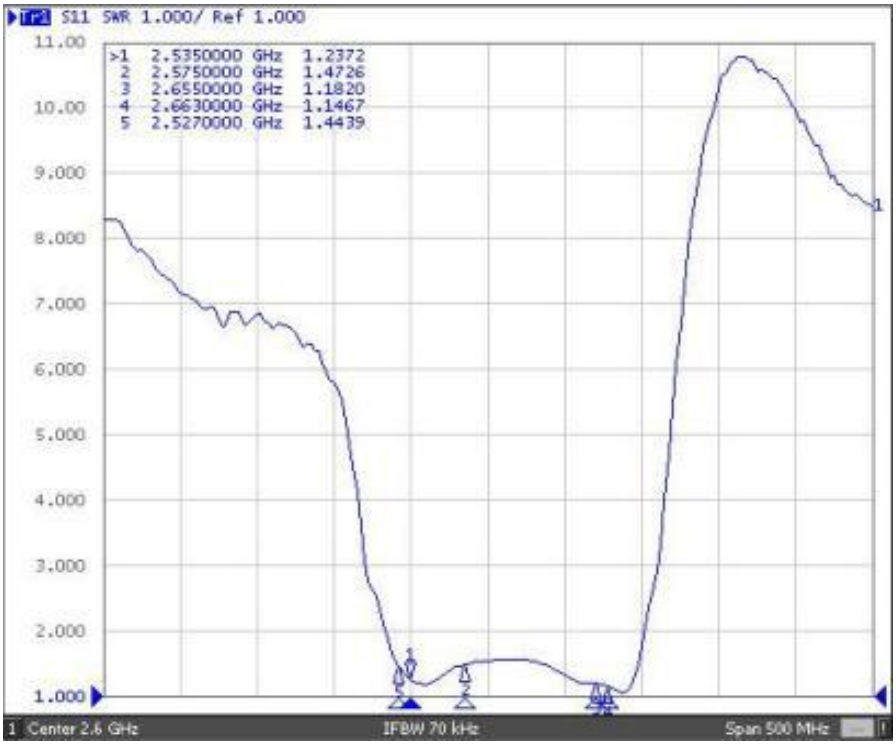
The first "*": Month Code (The code shown below varies in a 4-year-cycle)

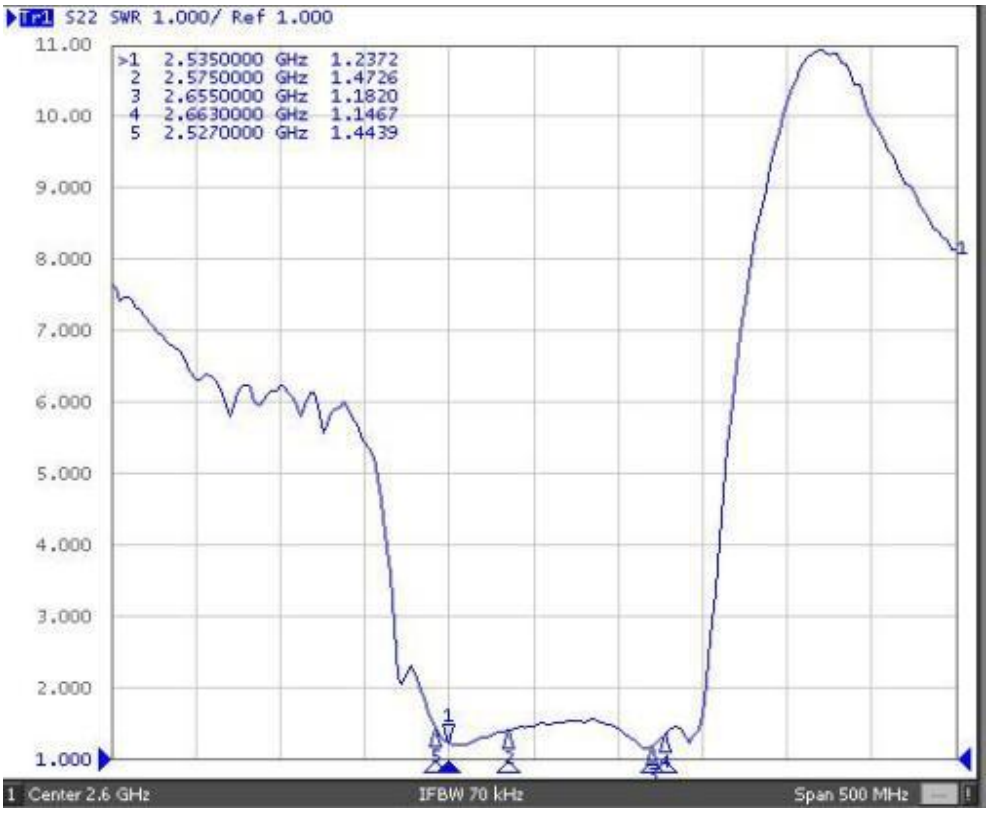
Month	1	2	3	4	5	6	7	8	9	10	11	12
2016/2020	n	p	q	r	s	t	u	v	w	x	y	z
2017/2021	A	B	C	D	E	F	G	H	J	K	L	M
2018/2022	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019/2023	a	b	c	d	e	f	g	h	i	j	k	m

The second "*": Date Code

Date	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
Code	A	B	C	D	E	F	G	H	J	K	
Date	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	
Code	L	M	N	P	Q	R	S	T	U	V	
Date	21st	22nd	23rd	24th	25th	26th	27th	28th	19th	30th	31st
Code	W	X	Y	Z	a	b	d	e	f	g	h

Typical Frequency Response


Tr1 S11 SWR 1.000/ Ref 1.000
>1 2.5350000 GHz 1.2372
2 2.5750000 GHz 1.4726
3 2.6550000 GHz 1.1820
4 2.6630000 GHz 1.1467
5 2.5270000 GHz 1.4439
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Center 2.6 GHz
IFBW 70 kHz
Span 500 MHz


Tr1 S22 SWR 1.000/ Ref 1.000
>1 2.5350000 GHz 1.2372
2 2.5750000 GHz 1.4726
3 2.6550000 GHz 1.1820
4 2.6630000 GHz 1.1467
5 2.5270000 GHz 1.4439
11.00
10.00
9.000
8.000
7.000
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5.000
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3.000
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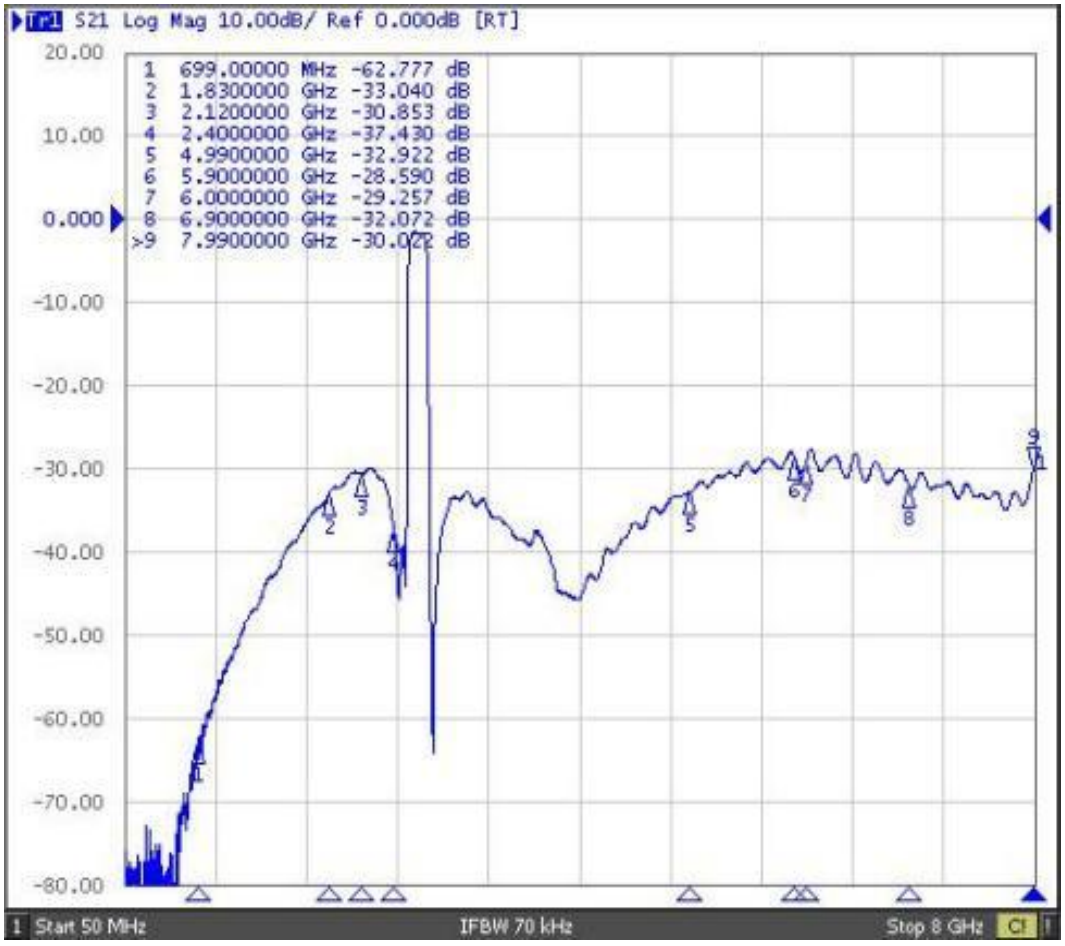
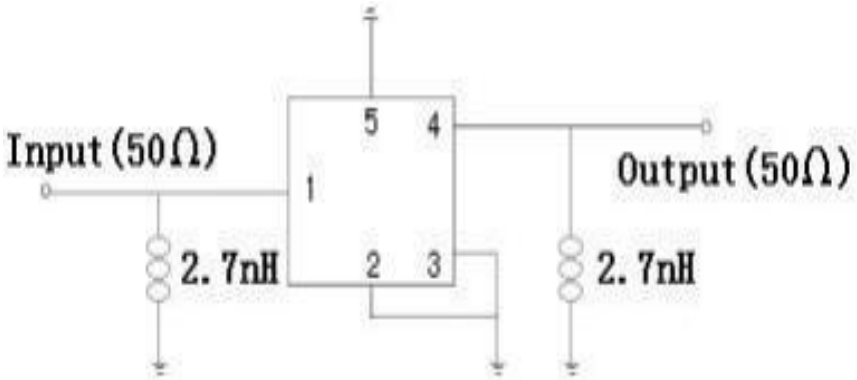


Test Circuit



Stability Characteristics

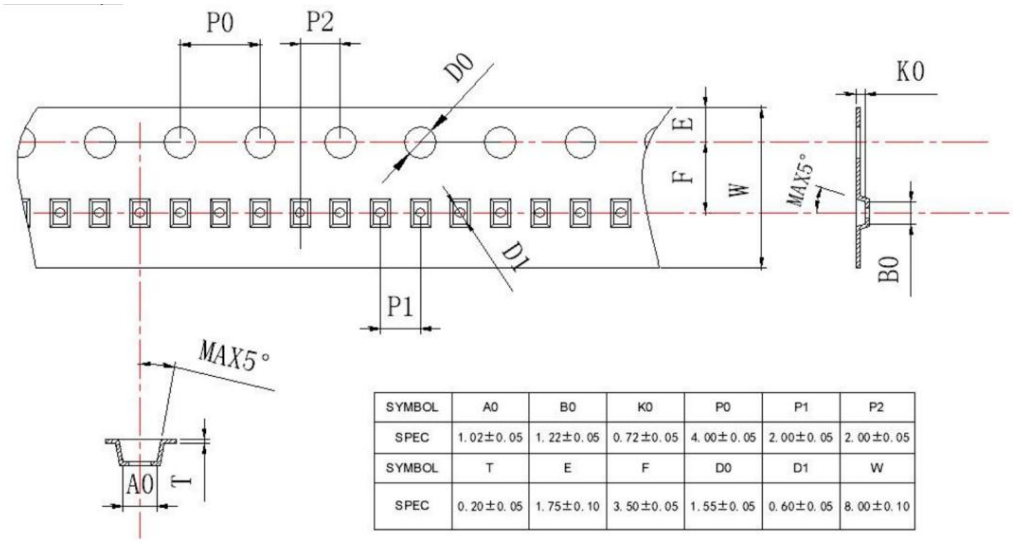
ITEM	Test Item	STD Reference	Test Conditions	per lot
Preconditioning		JESD22-A113	1) Temperature Cycling, 5 cycles -40°C to 85°C; 2) Bake, 24 hrs @85±5°C; 3)Moisture Soak, Soak time and conditions per IPC/JEDEC J-STD-020 based on device MSL level; 4) Reflow, 3 reflow cycles; 5) Drying, Room ambient temperature.	All behind
1	Temperature Cycling	JESD22-A104	-40°C / +85°C ,5°C/min, 15min dwell, < 1 min transfer time,500cycles	3*25 pcs
2	High Temperature Storage	JESD22-A103	Temperature = 85°C, 1000 hours.	3*25 pcs
3	Temperature Humidity no bias	JEDEC Std A101-B	85°C 85%RH 240 hours	3*25 pcs
4	Human Body Mode ESD	JESD22-A114	Ta=25°C, ⩾100V	3 pcs
5	Charge Device Mode ESD	JESD22-C101	Ta=25°C, ⩾100V	3 pcs
6	Solderability	JESD22-B102	Wetting: 245°C, 5s.	22 pcs
7	Drop Test	JESD22-B111	1500 Gs, 0.5 millisecond duration, half-sine pulse.	20 pcs
8	Mechanical Shock	JESD-47	Shock pulse of 1500g with pulse duration of 0.5+/-0. 1msec (X ,Y & Z); 5 shocks per axis.	3*25 pcs

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.

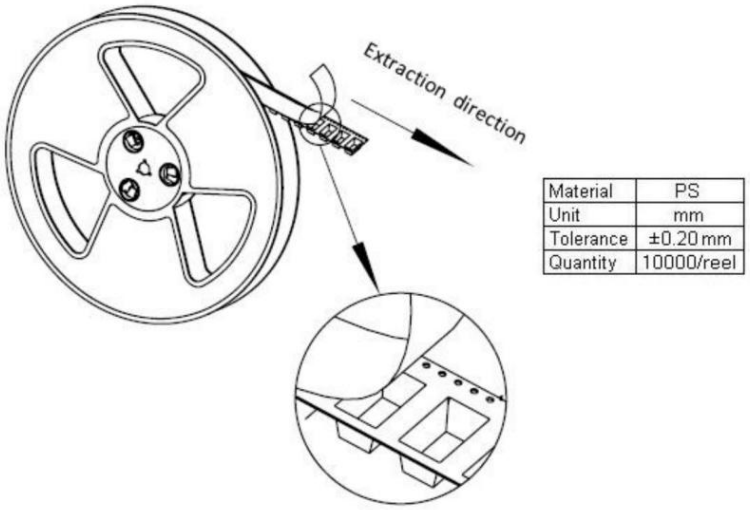
Packing Information

Carrier Tape



SYMBOL	A0	B0	K0	P0	P1	P2
SPEC	1.02±0.05	1.22±0.05	0.72±0.05	4.00±0.05	2.00±0.05	2.00±0.05
SYMBOL	T	E	F	D0	D1	W
SPEC	0.20±0.05	1.75±0.10	3.50±0.05	1.55±0.05	0.60±0.05	8.00±0.10

Reel Dimensions

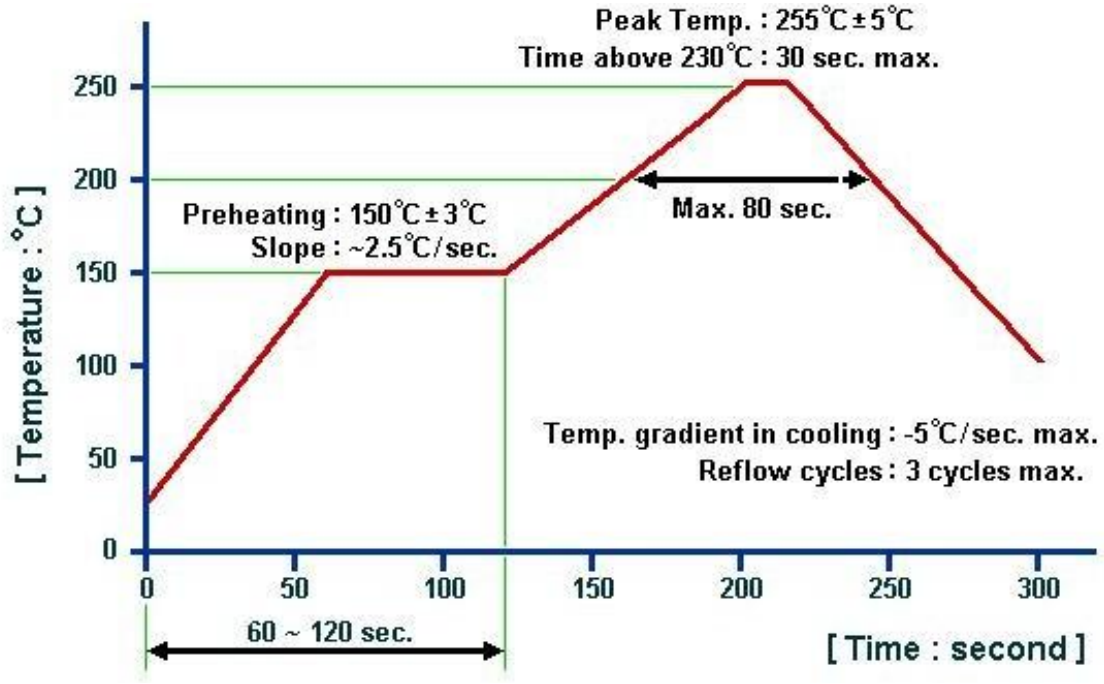


Material	PS
Unit	mm
Tolerance	±0.20 mm
Quantity	10000/reel

Outer Packing

Type	Quantity	Dimension	Description	Weight
Carton Box I	100000	240×210×285mm	anti-static plastic bag & carton box 1 reel / bag 10 bags / box (100000pcs)	2.15kg
Carton Box II	300000	470×310×285mm	30 bags / box (300000pcs)	6.22kg

Recommended Soldering Profile



Remarks:

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 sales@sainty-tech.com.