



RF SAW Filter Series – RoHS Compliance

LTE Band 7 system

For Rx Single Type

2620~2690 MHz Band Working Frequency

P/N: SF11092655B702T

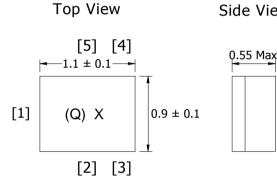
Features

- Low loss, Low pass band ripple
- Single to single operation
- Impedance at input and output 50 Ohm
- Package for <u>Surface</u> <u>Mount</u> <u>Technology</u> (SMT)
- Electrostatic Sensitive Device (ESD)
- Ultra small package : (1.1mm × 0.9mm x 0.55mm)
- **RoHS** Compliance
- Moisture Sensitive Level 3 (MSL3)

Application

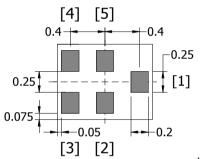
LTE Band 7 system

Package Dimensions









Unit : mm

華新科技股份有限公司 Walsin Technology Corporation

Pin Descriptions

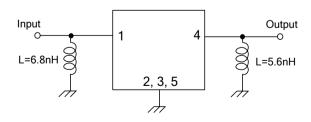
Pin	Description	Pin	Description
[1]	Input	[4]	Output
[2]	GND	[5]	GND
[3]	GND		

Marking Descriptions Description Marking (Q) Series Number

Date Code(Year+Month)

Х

Test Circuit





Electrical Specifications

Item		Frequency	Specification			Unit
		(MHz)	Min	Тур	Max	Unit
Center frequency		-	-	2655	-	MHz
Insertion loss		2620 ~ 2690	-	2.3	3.0	dB
Pass band ripple		2620 ~ 2690	-	0.7	1.5	dBp-p
	Input	2020 2020	-	1.6	2.0	-
VSWR	Output	2620 ~ 2690	-	1.7	2.2	-
		10 ~ 2400	28	31	-	dB
		45	50	65	-	dB
		2400 ~ 2500	30	33	-	dB
		2500 ~ 2570	35	42	-	dB
Absolute attenuation		2570 ~ 2600	2	4.5	-	dB
		2775 ~ 6000	15	30	-	dB
		7620 ~ 7830	15	28	-	dB
		7860 ~ 8000	15	27	-	dB
Terminating impedance		Input	50		Ohm	
		Output	50			Ohm

Note : With matching network (Ref. testing environment circuit as shown above).

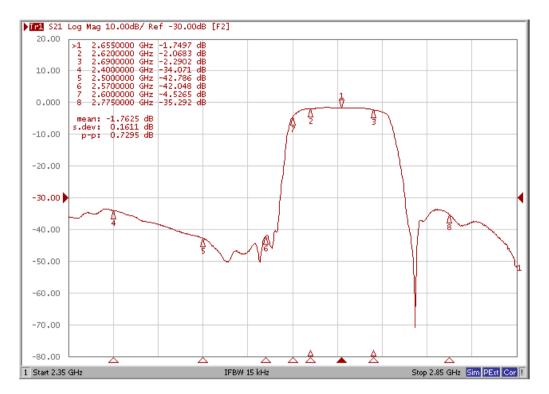
Absolute Maximum Ratings

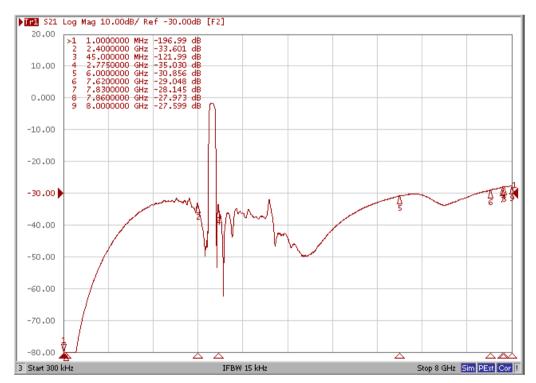
Item	Rating	Unit
DC permissive voltage	0	V
Maximum input power	10	dBm
Operating temperature range	-40 ~ +85	°C
Storage temperature range	-40 ~ +85	°C



Typical Frequency Response

Input-Output insertion



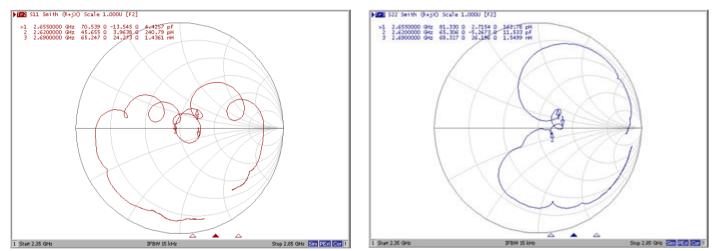




VSWR

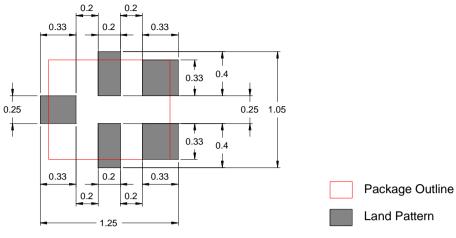


Smith chart



Approval Sheet Solder Land Pattern





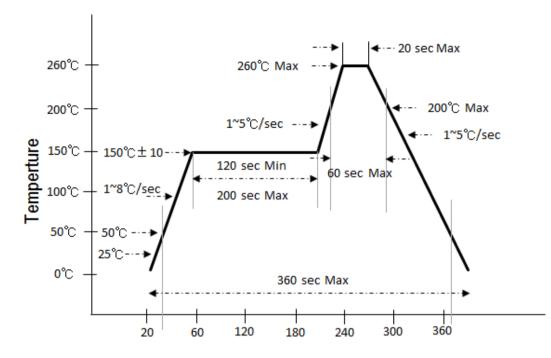
Unit : mm

Reliability Test

Test	Procedure/Test method	Requirements
	*Frequency : 10Hz ~ 55Hz	
	*Total amplitude: 1.5mm	
Vibration	*Sweep period : 1.0 minute	
	*Vibration directions : 3 mutually perpendicular	
	*Duration : 2 hours / direct	
	*Height:1.0 m	
Drop test	*Test surface : Rigid surface of concrete or steel	
	*Times : 10 times	
	*Temperature : +70°C± 2°C	After the test, specimen would be kept
Static humidity	*Relative humidity : 90%	at room temperature for 2 hours.
	*Duration : 96 hours	
	1. 30 minutes at -40°C,	And then the measured values shall
Temperature cycling	2. 30 minutes at +85°C,	fulfill the Electrical Specifications.
	*cycle time : 100 times	
	*Exposure temperature : 85°C± 5°C	
High temperature exposure	*Exposure duration : 240 hours	
	*Exposure temperature : -40°C± 5°C	
Low temperature exposure	*Exposure duration : 240 hours	
Deflew celdering	*Temperature / Duration:275°C / 10sec	
Reflow soldering	*Total time : 6 minute (IR-reflow)	



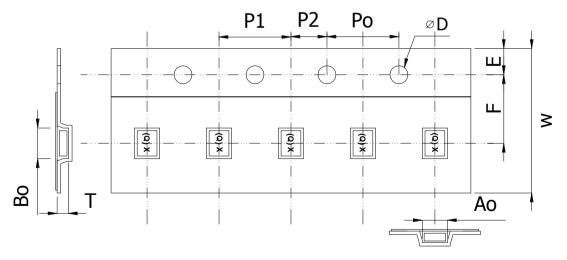
260 ℃ Suggested Solder Reflow



Ordering Code

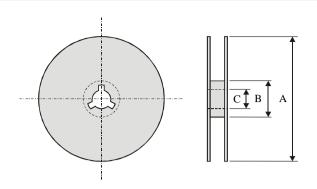
SF	1109	2655	B7	02	Т
Series	Dimension code	Frequency	Application	Serial Number	Packing
SF : SAW Filter	Per2 digits of Length, Width	2655 : Center Freq	B7 : LTE Band 7	Design Code	T : Reeled
	1109=	(2655MHz)			
	Length 1.1mm	· · · · ·			
	Width 0.9mm				

Packing



Plastic Tape specifications

Index	Ao	Во	ΦD	Т	W
Dimension (mm)	1.10 ± 0.10	$\textbf{1.3}\pm\textbf{0.10}$	1.55 ± 0.05	$\textbf{0.75} \pm \textbf{0.10}$	8.0 ± 0.20
Index	E	F	Po	P1	P2
Dimension (mm)	$\textbf{1.75} \pm \textbf{0.10}$	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.0 ± 0.10



Index	А	В	С	
Dimension (mm)	Ф180.0 +0/-1.5	$\Phi 66.0\pm 0.5$	$\Phi 13.0\pm 0.2$	

Note : The product shall be packed properly not to be damaged during transportation and storage. Taping Quantity : 5000 pieces per 7"reel

Caution Of Handling

Limitation of Applications

Please contact us before using our products for the applications listed below which require especially high reliability for the prevention of defects, which might directly cause damage to the third party's life, body or property.

- (1) Aircraft equipment
- (2) Aerospace equipment
- (3) Undersea equipment
- (4) Medical equipment
- (5) Disaster prevention / crime prevention equipment
- (6) Traffic signal equipment
- (7) Transportation equipment (vehicles, trains, ships, etc.)
- (8) Applications of similar complexity and /or reliability requirements to the applications listed in the above.

Storage Condition

- (1) Products should be used in 6 months from the day of WALSIN outgoing inspection, which can be confirmed.
- (2) Storage environment condition.
 - Products should be storage in the warehouse on the following conditions.
 - Temperature : -10 to +40°C
 - Humidity : 30 to 70% relative humidity
 - Don't keep products in corrosive gases such as sulfur. Chlorine gas or acid or it may cause oxidization of electrode, resulting in poor solderability.
 - Products should be storage on the palette for the prevention of the influence from humidity, dust and son on.
 - Products should be storage in the warehouse without heat shock, vibration, direct sunlight and so on.
 - Products should be storage under the airtight packaged condition.

Important Notes

- (1) This device should not be used in any type of fluid such as water, oil, organic solvent, etc.
- (2) Cleaning agent isopropyl alcohol and ethyl alcohol can be used.
- (3) As rapid temperature change for cleaning after reflow soldering might be a cause of degradation or destruction, clean this component after confirming that temperature of this component goes down to room temperature.
- (4) As ultrasonic vibration might be a cause of degradation or destruction, do not use ultrasonic cleaning.
- (5) This device follows JEDEC standards for moisture classifications. The following this device is classified as <u>Moisture Sensitive Level 3</u> This device is moisture sensitive and need to be handled within proper MSL 3 guidelines to avoid damage from moisture absorption and exposure to solder reflow temperatures that can result in yield and reliability degradation
- (6) This is an <u>Electrostatic Sensitive Device.</u>
 Please avoid static voltage during operation and storage.
- (7) Sudden change of temperature shall be avoided, deterioration of the characteristics can occur.
- (8) If any malfunction due to designing or manufacturing which is out of specification occurs within one year after the products have been delivered, the maker should exchange the defective products.



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>>Walsin Technology(华新科技(华科))

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