APPROVAL SHEET

RF SAW Filter Series – RoHS Compliance

LTE Band 41 system

For Tx Single Type

2535~2655 MHz Band Working Frequency

P/N：SF11092595B4108T

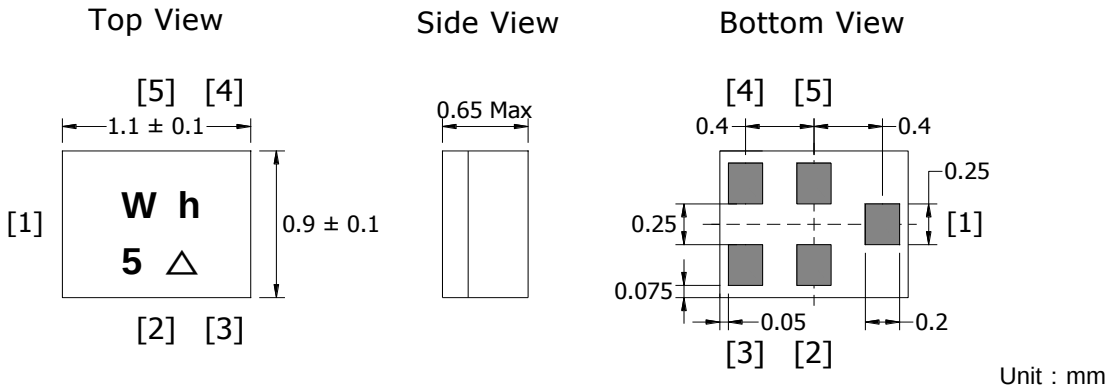
Features

- Low loss, Low pass band ripple
- Single to single operation
- Impedance at input and output 50 Ohm
- Package for **S**urface **M**ount **T**echnology (SMT)
- **E**lectrostatic **S**ensitive **D**evice (ESD)
- Ultra small package：(1.1mm × 0.9mm x 0.65mm)
- RoHS Compliance
- **M**oisture **S**ensitive **L**evel 3 (MSL3)

Application

- LTE Band 41 system

Package Dimensions



Unit：mm

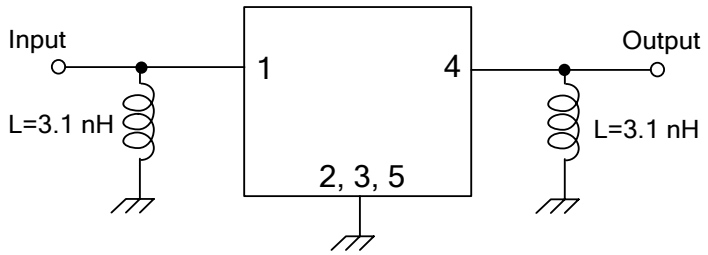
Pin Descriptions

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

Marking Descriptions

Marking	Description
W	Walsin
h	Band Class
5	Series Number
△	Date Code (Year+Month)

Test Circuit



Electrical Specifications

Item		Frequency (MHz)	Specification			Unit
			Min	Typ	Max	
Center frequency		-	-	2595	-	MHz
Insertion loss		2535 ~ 2655	-	1.6	2.8	dB
Pass band ripple		2535 ~ 2655	-	0.5	2.0	dBp-p
VSWR	Input	2535 ~ 2655	-	2.1	2.5	-
	Output		-	2.1	2.5	-
Absolute attenuation		2110 ~ 2170	20	23	-	dB
		2401 ~ 2468	23	26	-	dB
		2451 ~ 2473	25	30	-	dB
		2456 ~ 2478	25	30	-	dB
		2461 ~ 2483	25	29	-	dB
		2775 ~ 4992	18	22	-	dB
Terminating impedance		Input	50			Ohm
		Output	50			Ohm

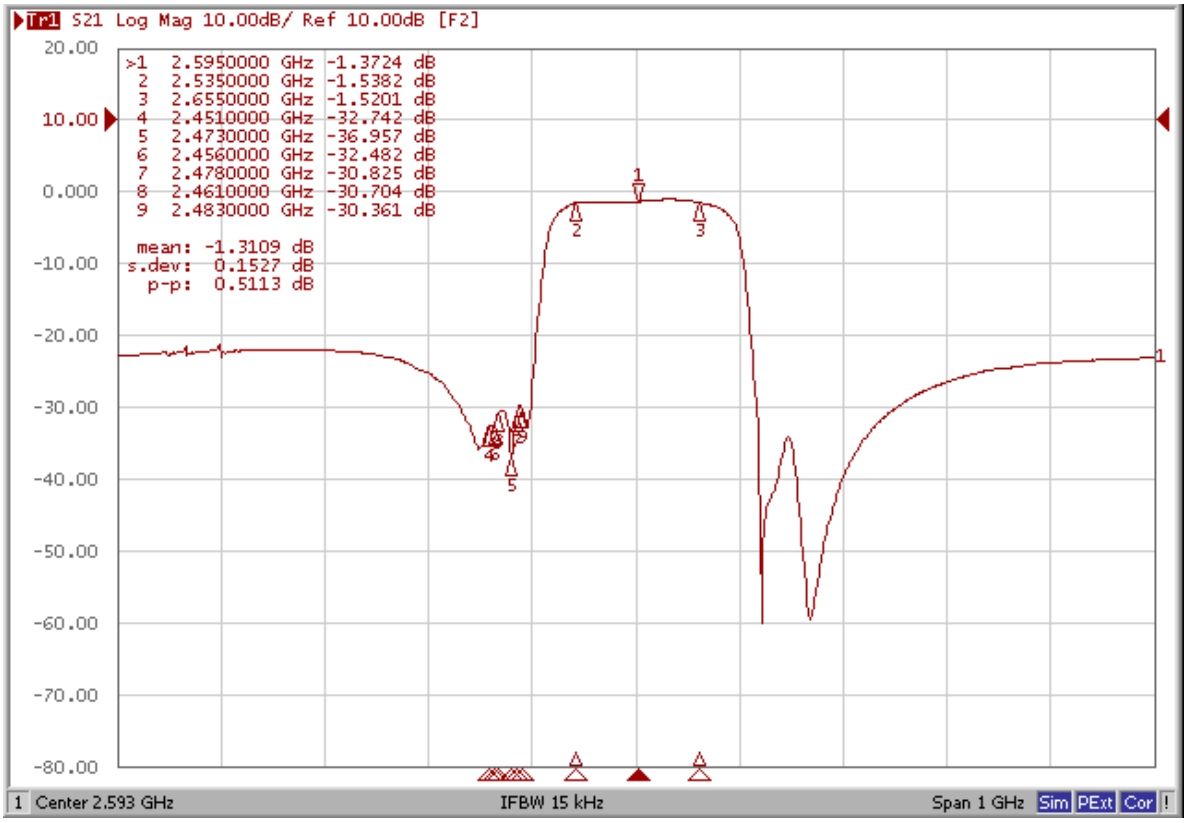
Note：With matching network (Ref. testing environment circuit as shown above).

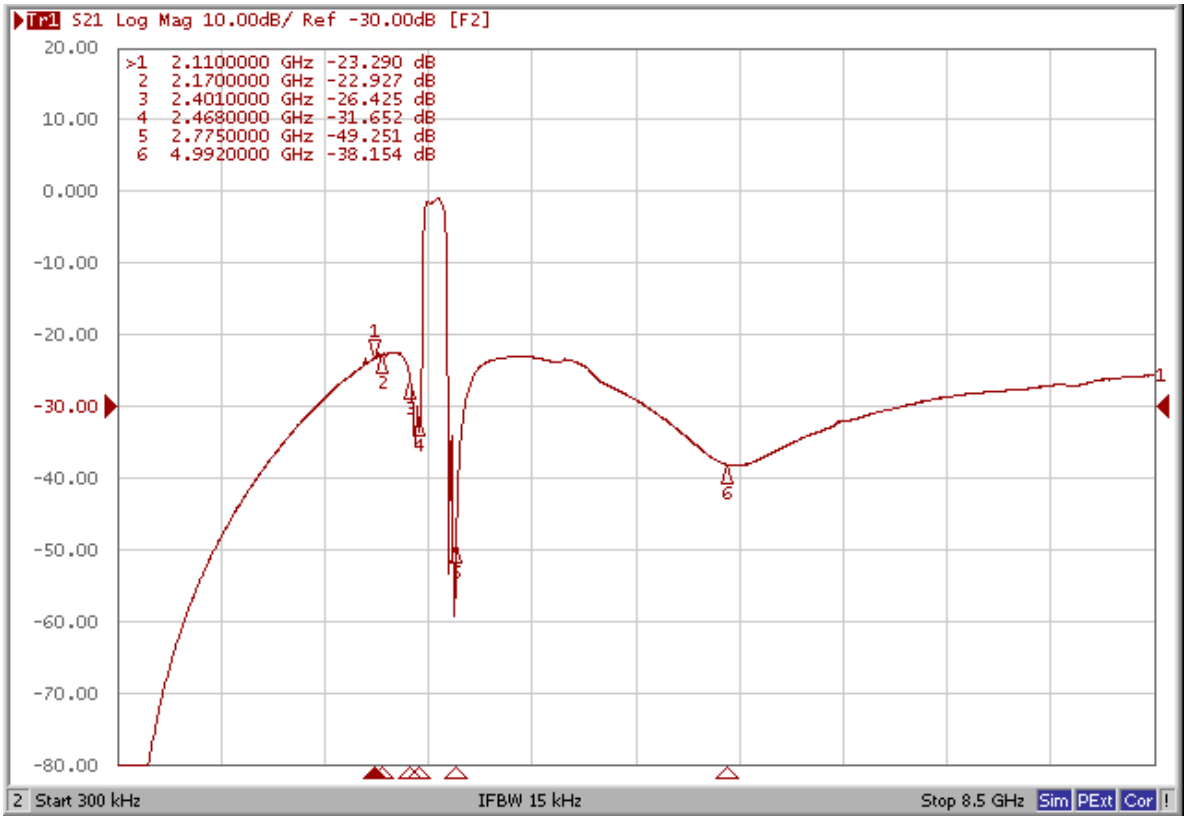
Absolute Maximum Ratings

Item	Rating	Unit
DC permissive voltage	3	V
Maximum input power	29	dBm
Operating temperature range	-40 ~ +85	℃
Storage temperature range	-40 ~ +85	℃

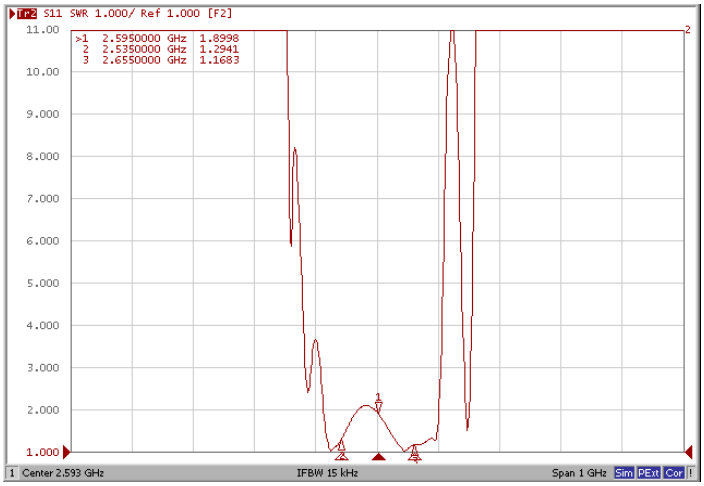
Typical Frequency Response

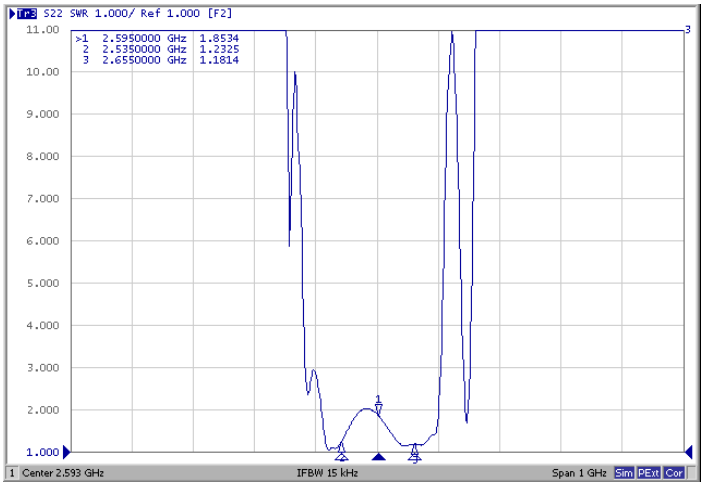
■ **Input-Output insertion**



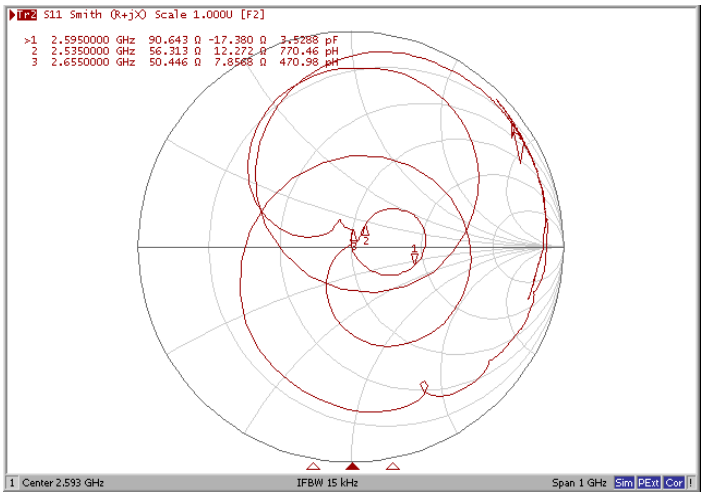


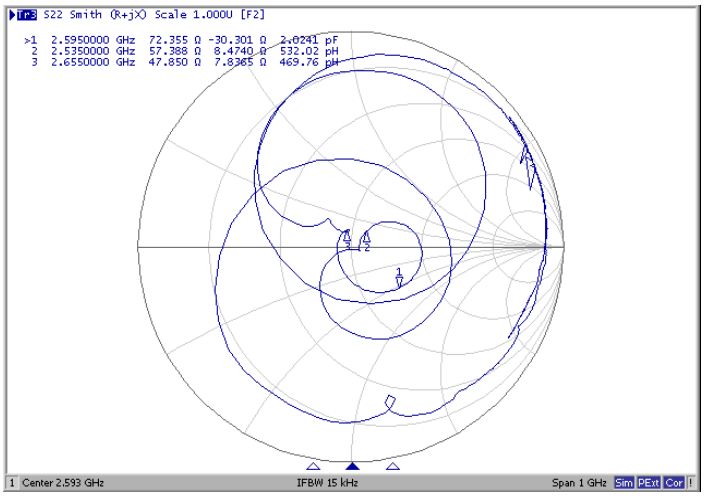
■ VSWR



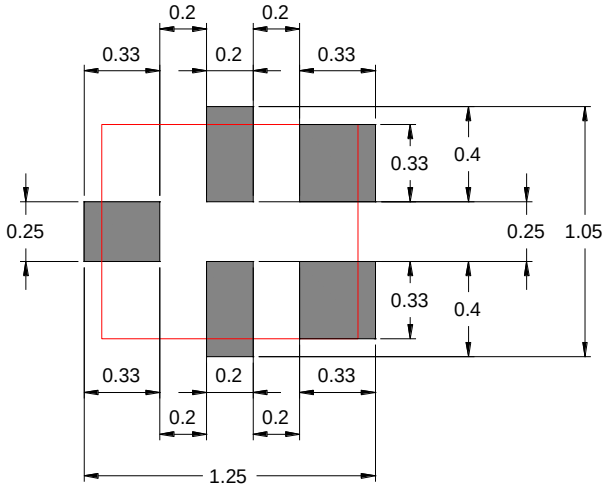


■ Smith Chart





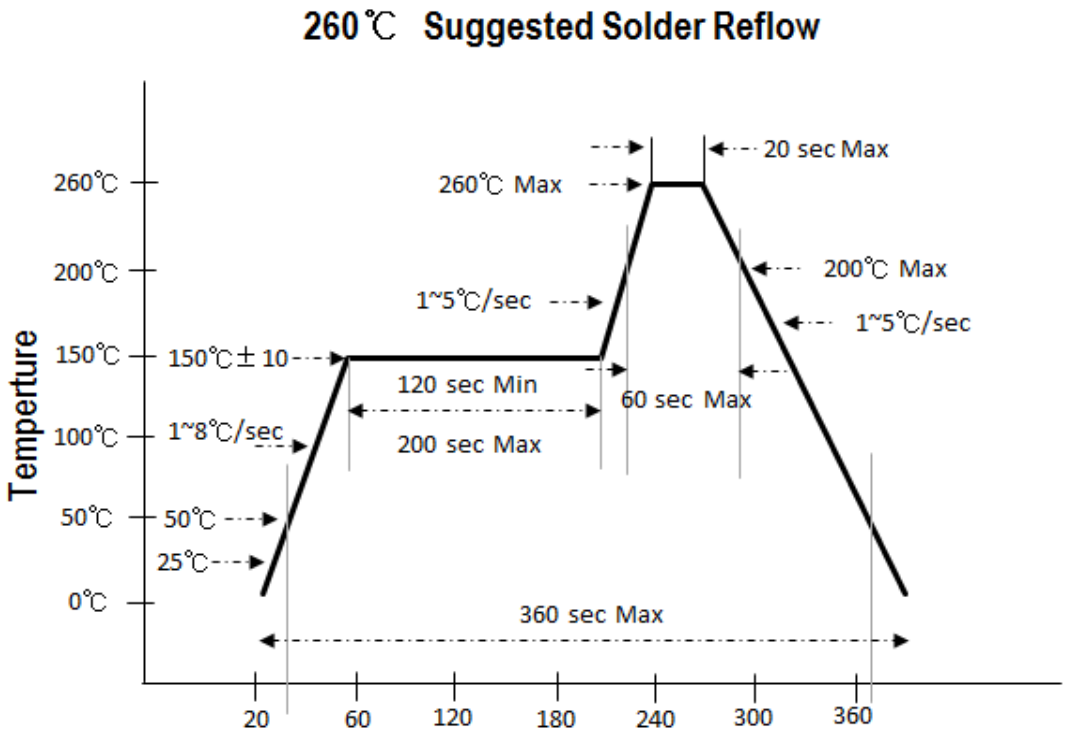
Solder Land Pattern



Reliability Test

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

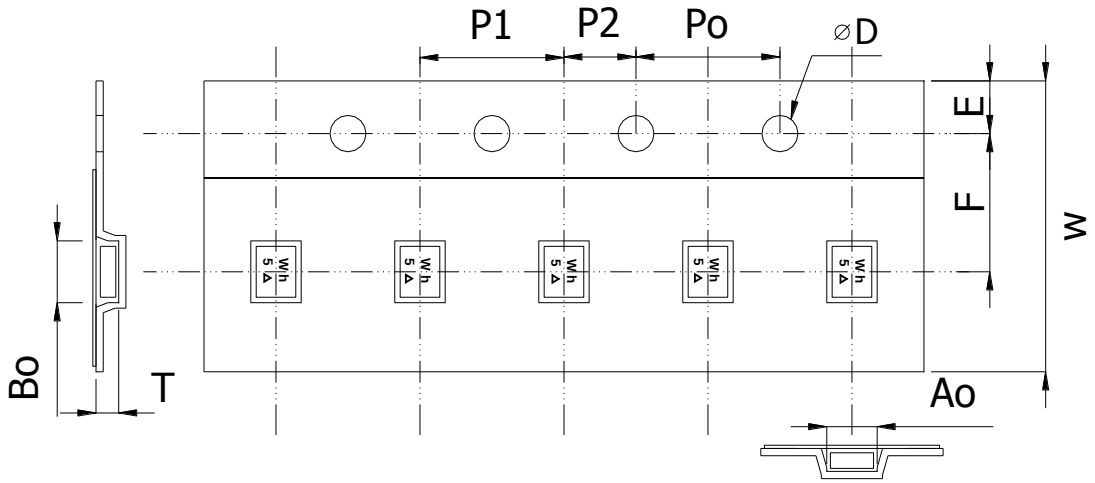
Soldering Condition



Ordering Code

SF	1109	2595	B41	08	T
Series	**Dimension code**	**Frequency**	**Application**	**Serial Number**	**Packing**
SF：SAW Filter	Per2 digits of Length, Width 1109= Length 1.1mm Width 0.9mm	2595：Center Freq (2595MHz)	B41：Band41	Design Code	T：Reeled

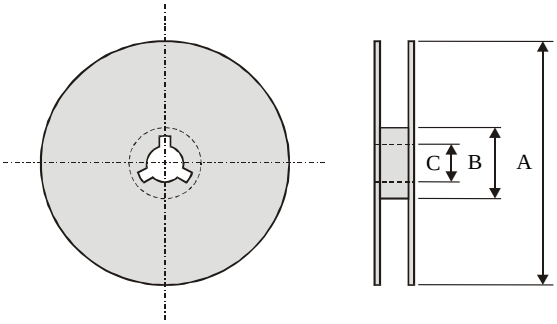
Packing



Plastic Tape specifications

Index	Ao	Bo	ΦD	T	W
Dimension (mm)	1.10 ± 0.10	1.3 ± 0.10	1.55 ± 0.05	0.85 ± 0.10	8.0 ± 0.20
Index	E	F	Po	P1	P2
Dimension (mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.0 ± 0.10

Reel Dimensions



Index	A	B	C
Dimension (mm)	Φ180.0 +0/-1.5	Φ66.0 ± 0.5	Φ13.0 ± 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 **M**oisture **S**ensitive **L**evel **3**
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 **E**lectrostatic **S**ensitive **D**evice.
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.