TAI-SAW TECHNOLOGY CO., LTD.
No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
Taoyuan, 324, Taiwan, R.O.C.
TEL: 886-3-4690038 FAX: 886-3-4697532
E-mail: tstsales@mail.taisaw.com Web: www.taisaw.com

Product Specifications Approval Sheet

Product Description: SAW Rx Filter 1960 MHz LTE Band 2 SMD 1109

TST Part No.: TA1950A

Customer Part No.:_____

Customer signature required

Company:_____

Division: _____

Approved by : _____

Date: _____

Checked by:_____ Hayley Chou _____

Approved by:_____ Andy Yu _____

Date:_____ 2017/07/20 _____

1. Customer signed back is required before TST can proceed with sample build and receive orders.
2. Orders received without customer signed back will be regarded as agreement on the specifications.
3. Any specifications changes must be approved upon by both parties and a new revision of specifications shall be released to reflect the changes.

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SAW Rx Filter 1960 MHz LTE Band 2 SMD 1109 (60MHz BW)

MODEL NO.: TA1950A REV. NO.:3.0

A. MAXIMUM RATING:

1. Operating temperature range: -30 °C to +90 °C
2. Storage temperature range: -40 °C to +100 °C
3. Maximum Input Power: +15 dBm
4. Maximum DC Voltage: +/-5 V
5. Moisture Sensitivity Level: Level 1
6. ESD 50V(MM) 100V(HBM)

RoHS Compliant
Lead free
Lead-free soldering

Electrostatic **S**ensitive **D**evice (**ESD**)

B. ELECTRICAL CHARACTERISTICS:

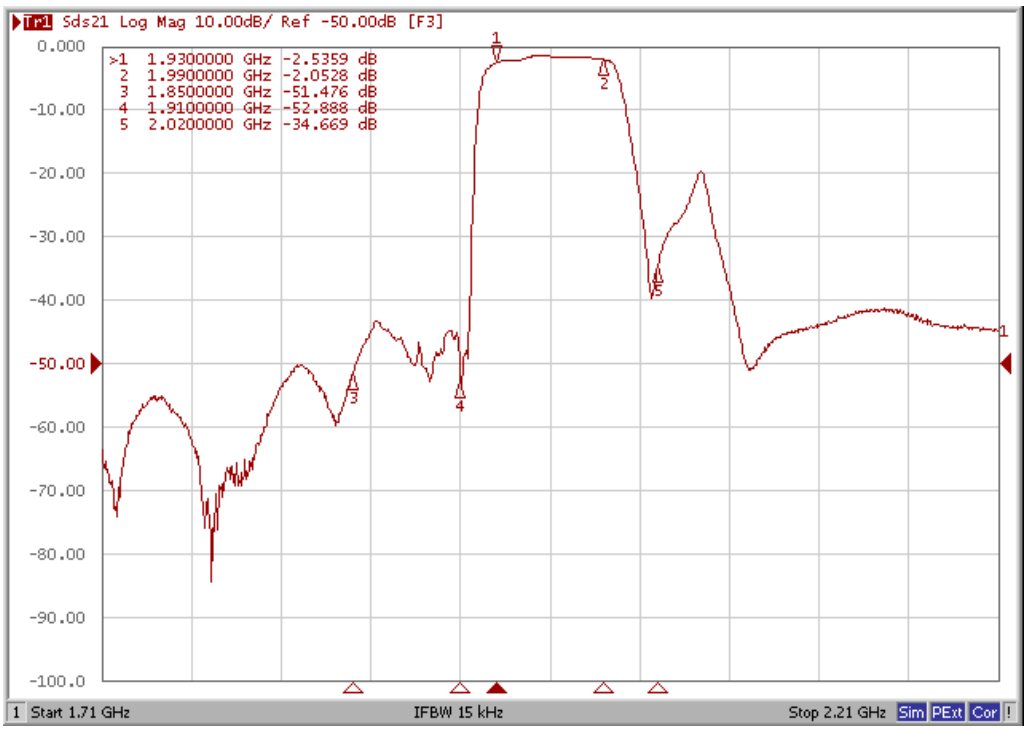
Terminating source impedance: Zs = 50 Ω (Single-ended)

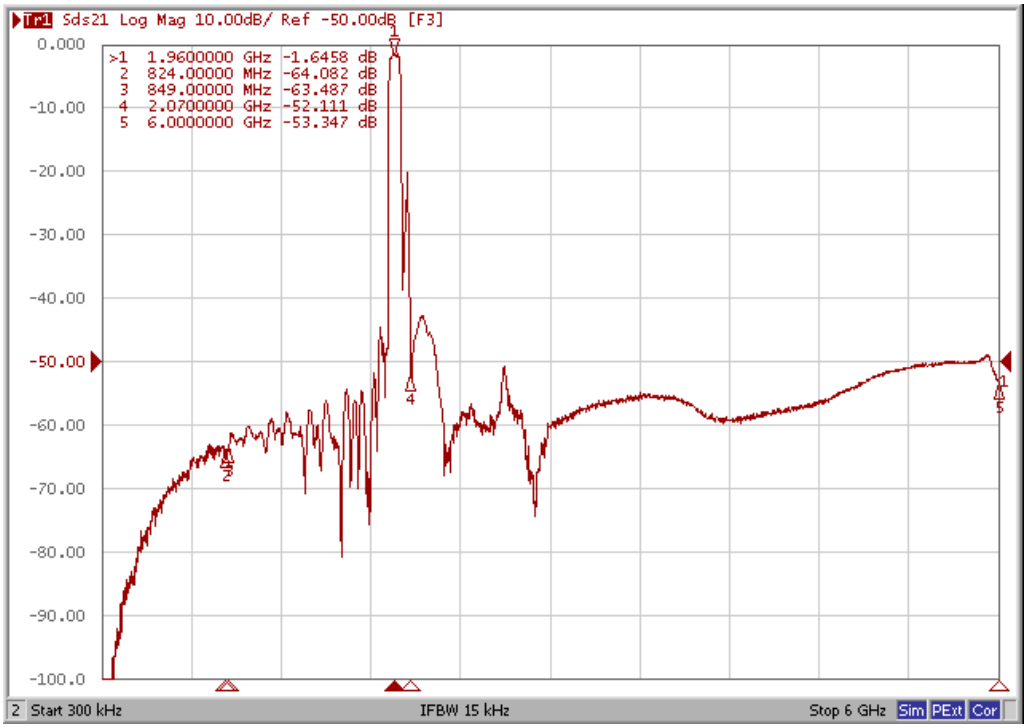
Terminating load impedance: ZL = 100//27nH Ω (Balanced)

Parameters Description			Unit	Min.	Typ.	Max.	Remarks
Center Frequency			MHz	-	1960	-	-
Insertion Loss		1930~1990 MHz	dB	-	2.8	3.7	at 1930.6~1989.4 MHz
			dB	-	-	4.0	-
Amplitude Ripple		1930~1990 MHz	dB_{p-p}	-	1.3	2.3	at 1930.6~1989.4 MHz
			dB_{p-p}	-	-	2.6	-
VSWR	Input	1930~1990 MHz	-	-	1.8	2.2	-
	Output	1930~1990 MHz	-	-	1.8	2.3	-
Amplitude balance (|S21|/|S31|)		1930~1990 MHz	dB	-1.8	-1.0~+1.3	+1.8	-
Phase balance ((ΦS21-ΦS31)+180)		1930~1990 MHz	deg.	-15	-10~+5	+15	-
Attenuation:							
10~1850 MHz			dB	40	51		-
824~849 MHz			dB	50	62	-	-
1850~1910 MHz			dB	40	44	-	-
2020~2070 MHz			dB	15	20	-	-
2070~6000 MHz			dB	35	42	-	-

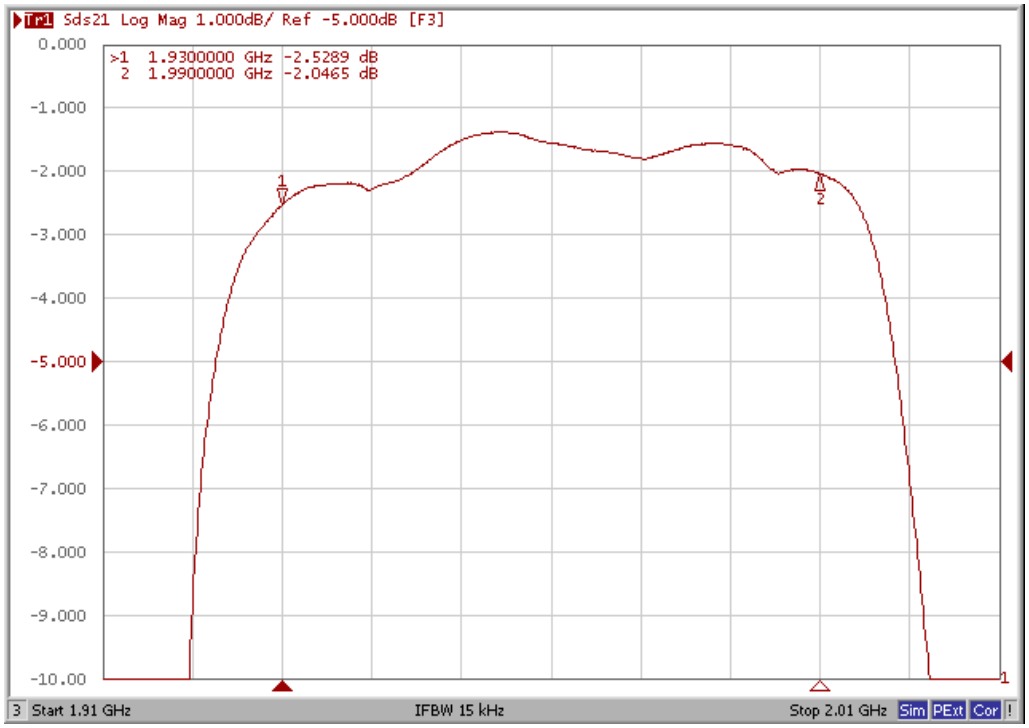
C. FREQUENCY CHARACTERISTICS:

Frequency Response

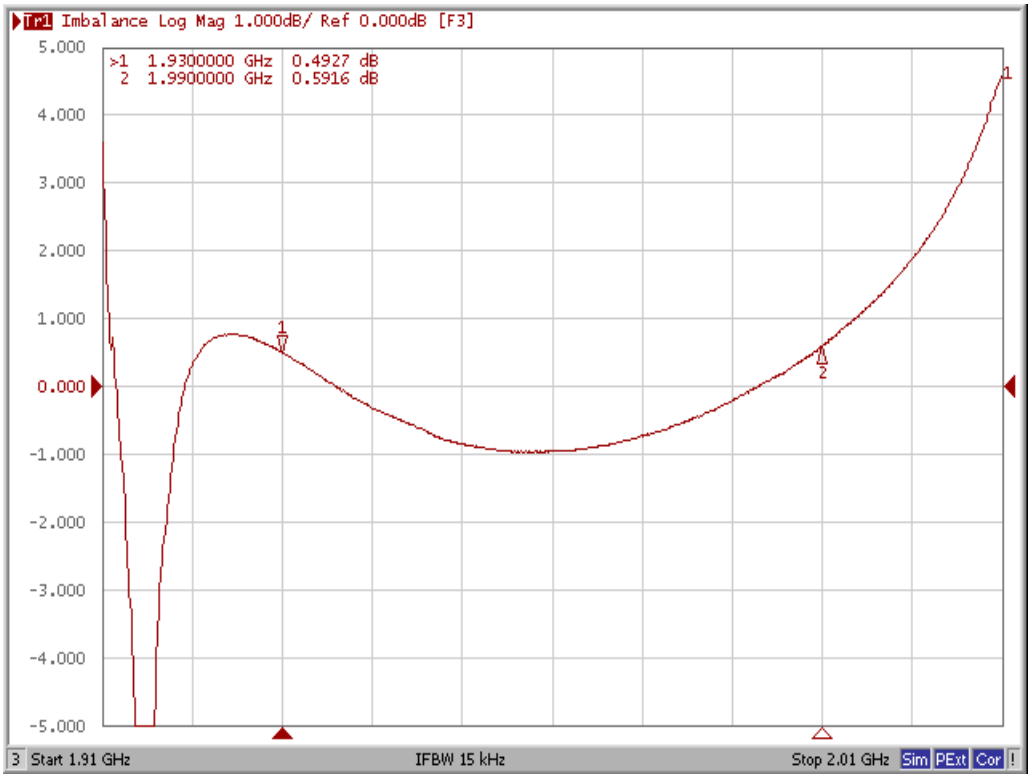




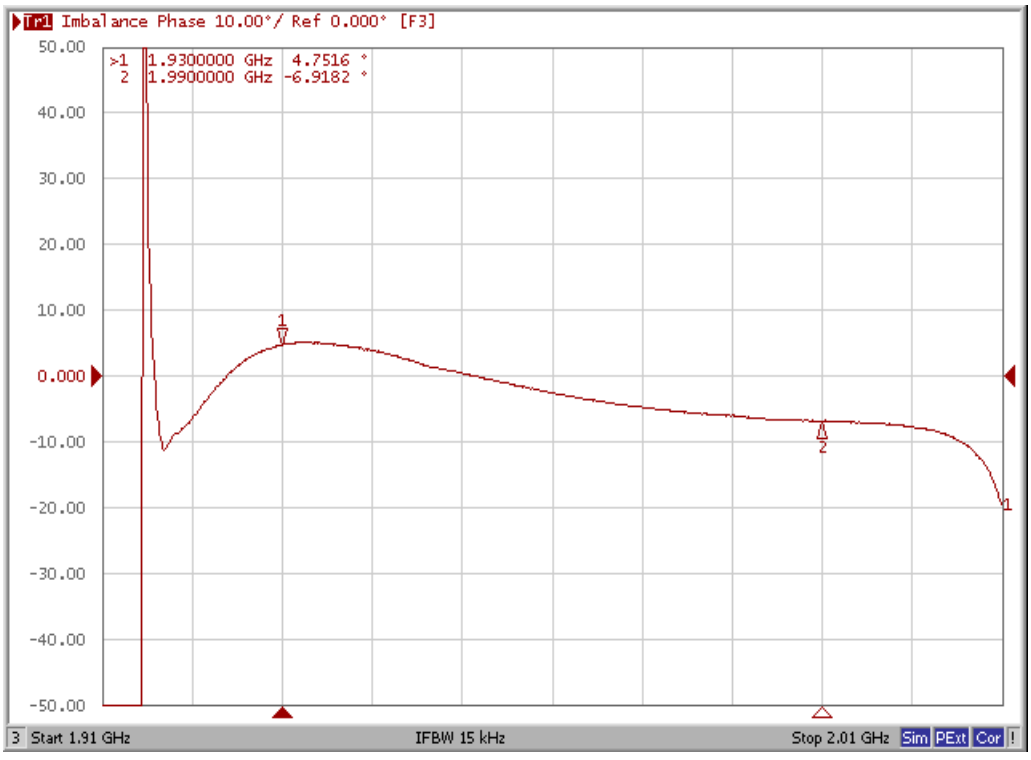
Ripple


Tr1 Sds21 Log Mag 1.000dB/ Ref -5.000dB [F3]
>1 1.9300000 GHz -2.5289 dB
2 1.9900000 GHz -2.0465 dB
0.000
-1.000
-2.000
-3.000
-4.000
-5.000
-6.000
-7.000
-8.000
-9.000
-10.00
3 Start 1.91 GHz
IFBW 15 kHz
Stop 2.01 GHz
Sim PExt Cor

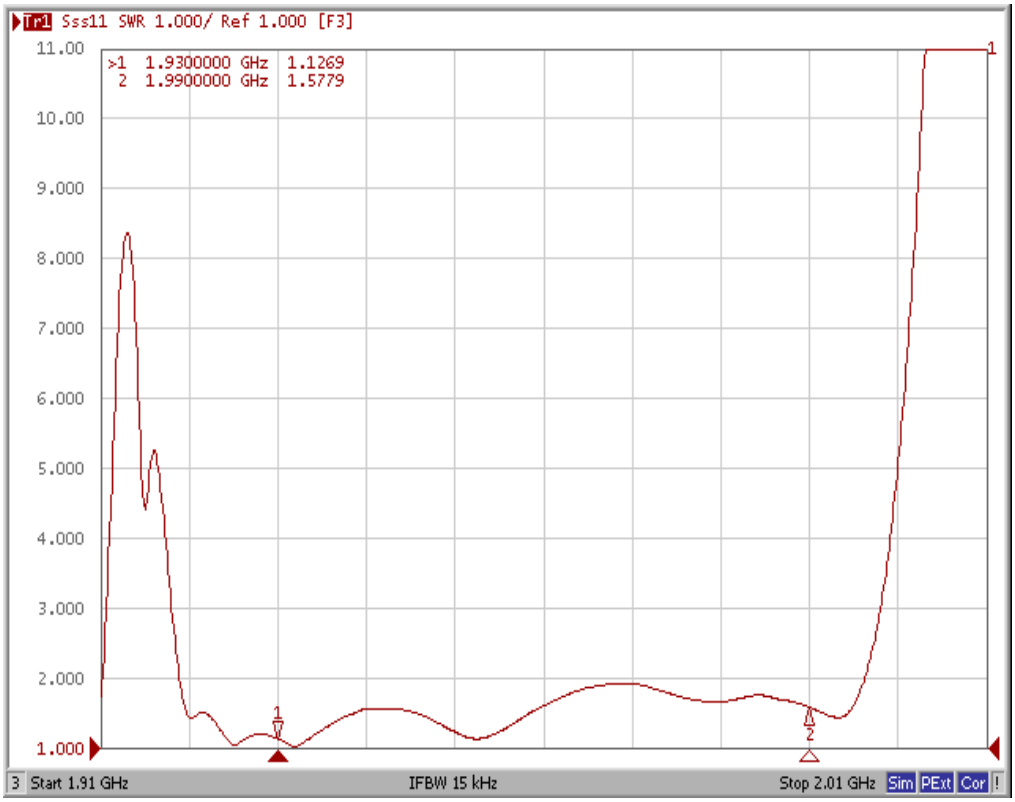
Amplitude balance



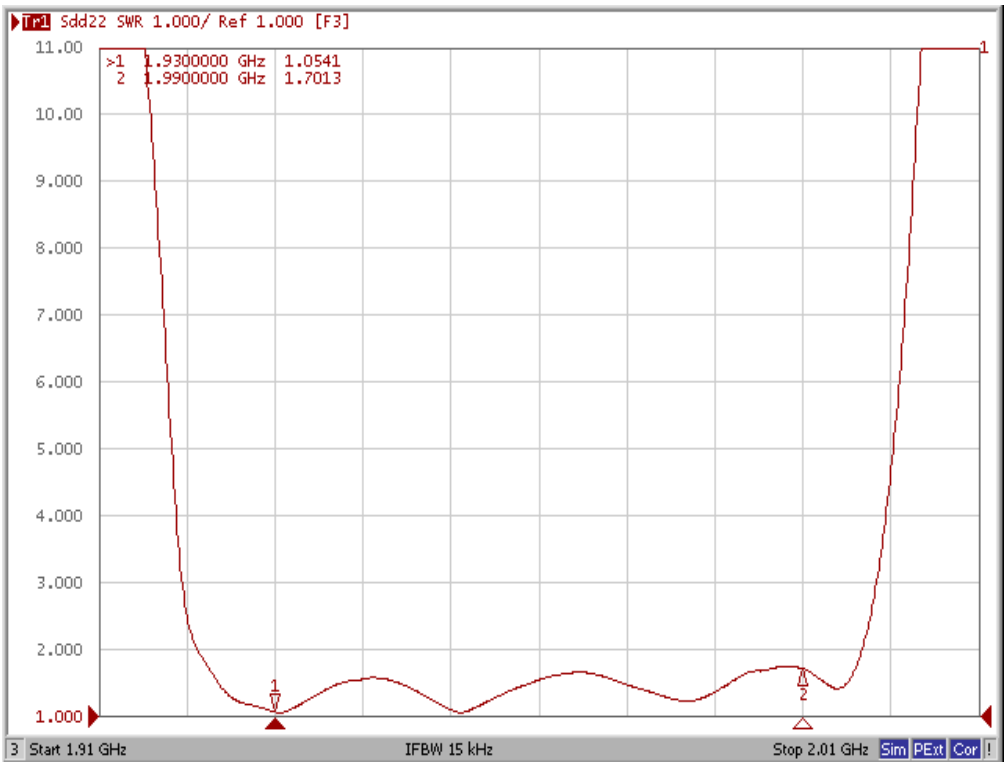
Phase balance



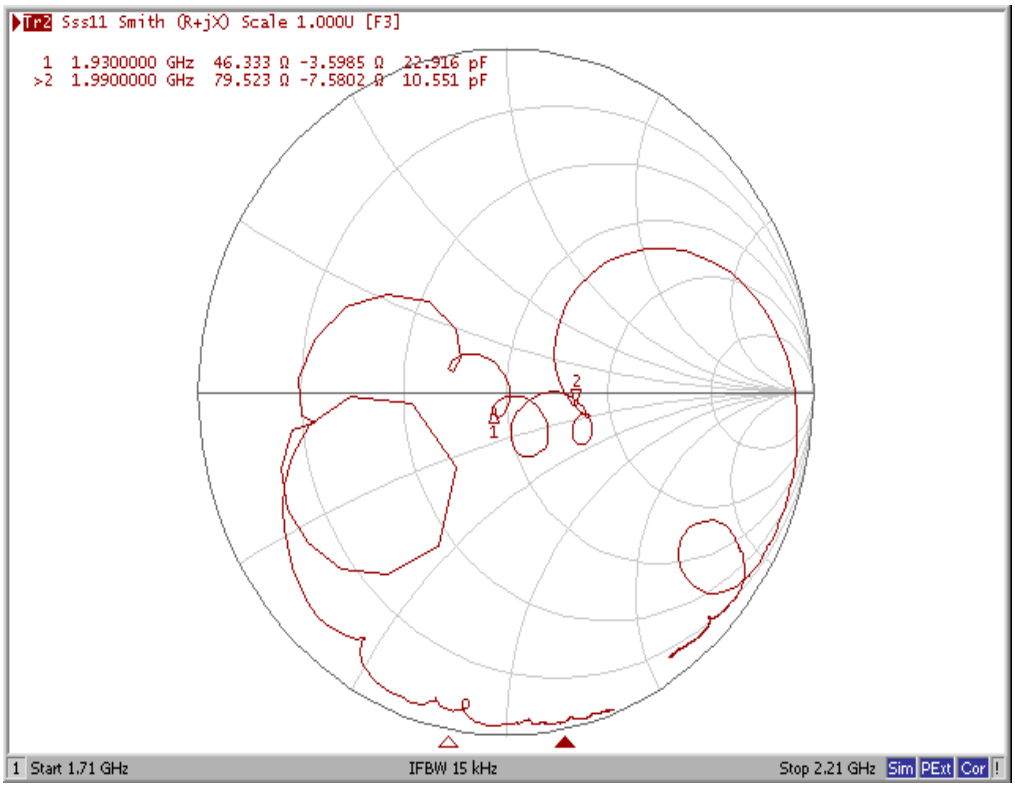
VSWR (S11)



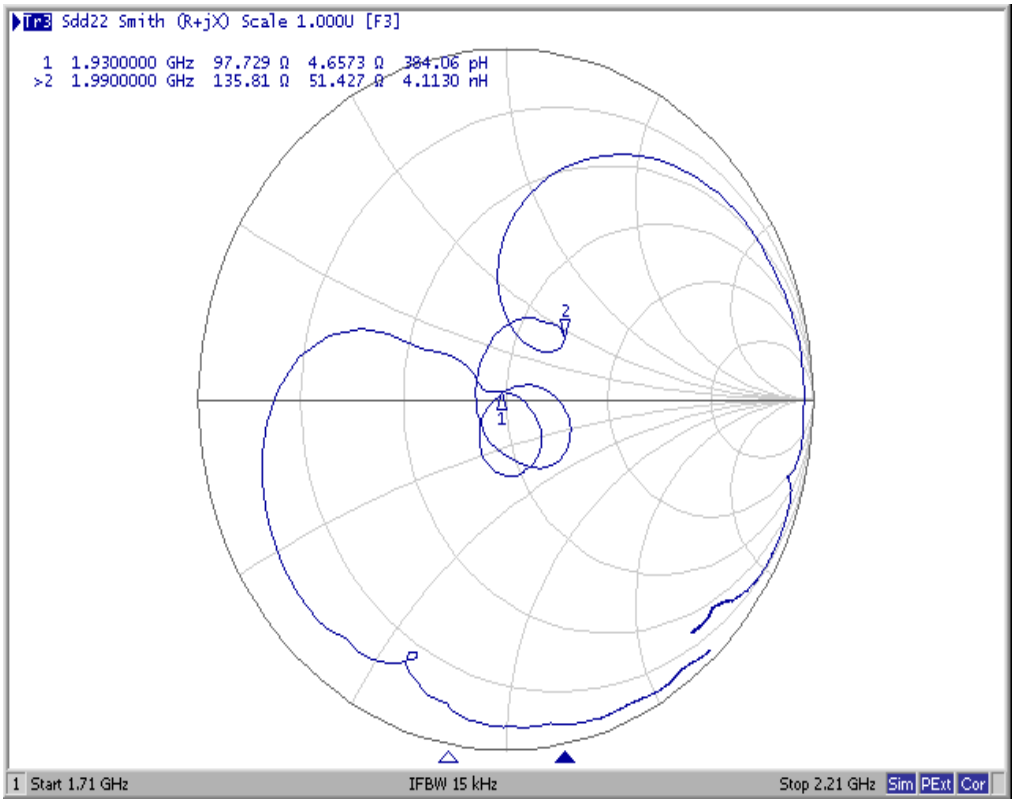
VSWR (S22)



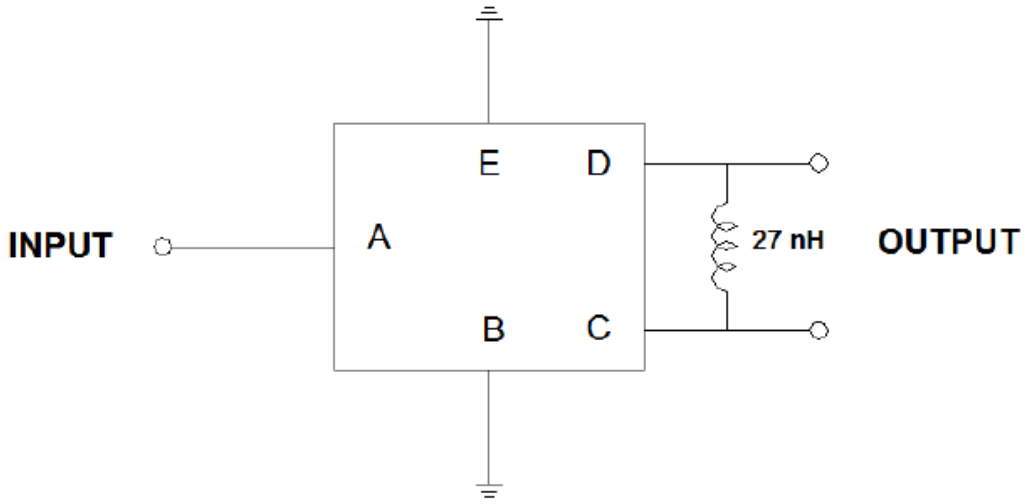
Smith Chart (S11)



Smith Chart (S22)



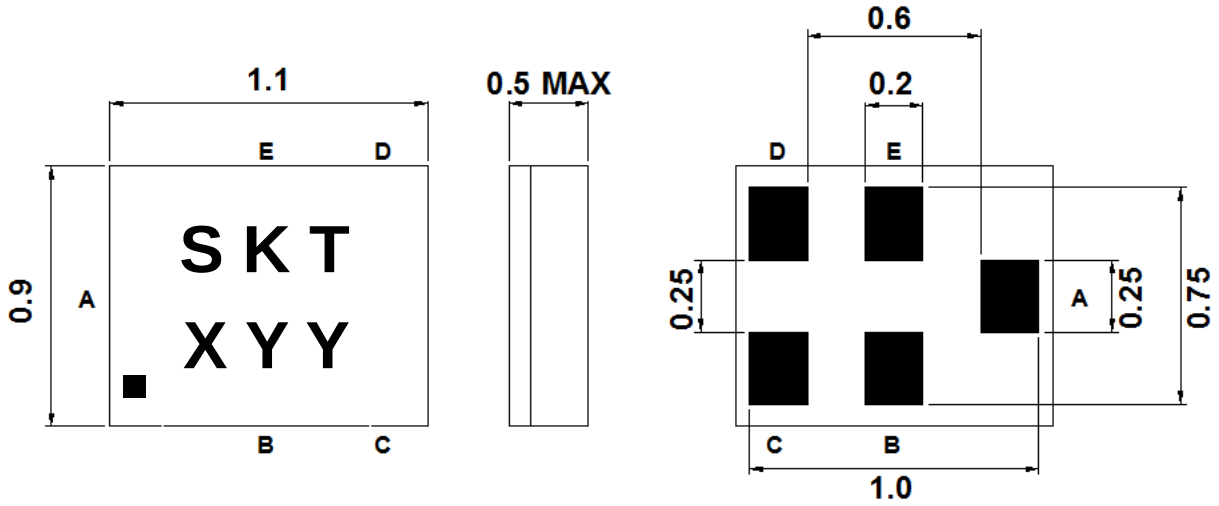
D. MEASUREMENT CIRCUIT:



Source Impedance: 50 Ω

Load Impedance : 100 Ω

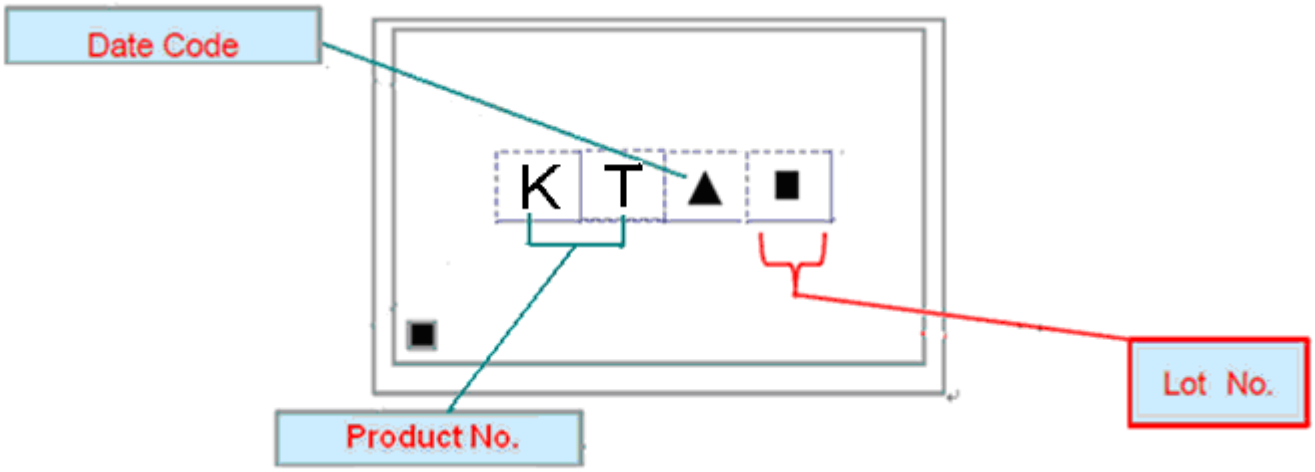
E. OUTLINE DRAWING:



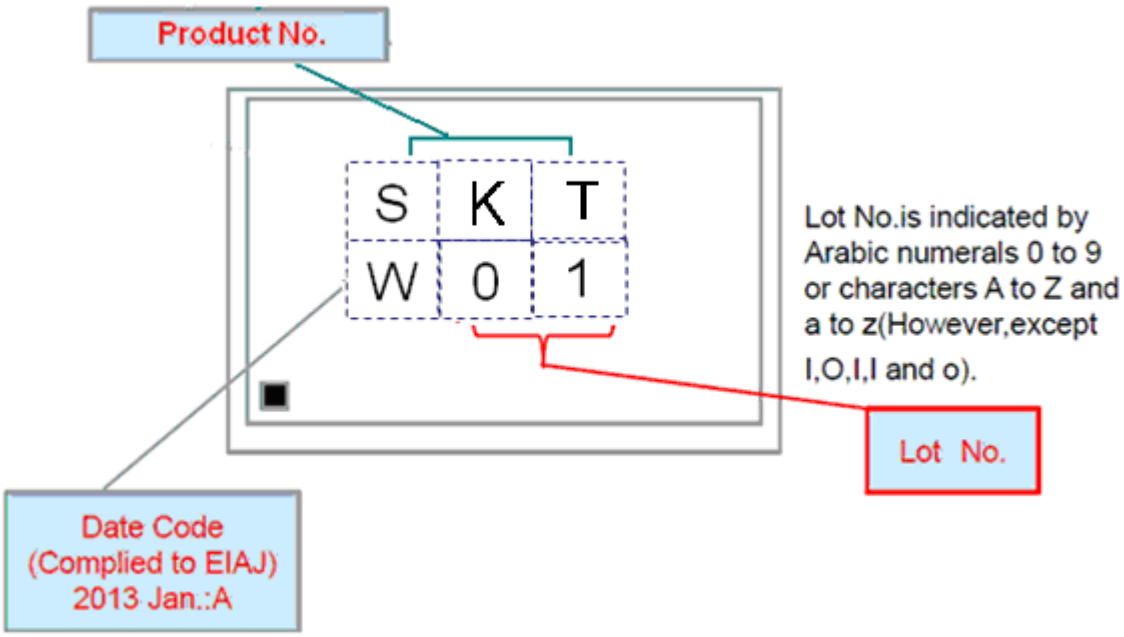
Marking Descriptions	
S	Product No 1
KT	Product No 2
X	Date Code(Year+Month)
YY	Lot No

Pin Description	
B, E	Ground
A	Input
C, D	Balanced Output

Top View (Sample Production):



Top View (Mass Production):

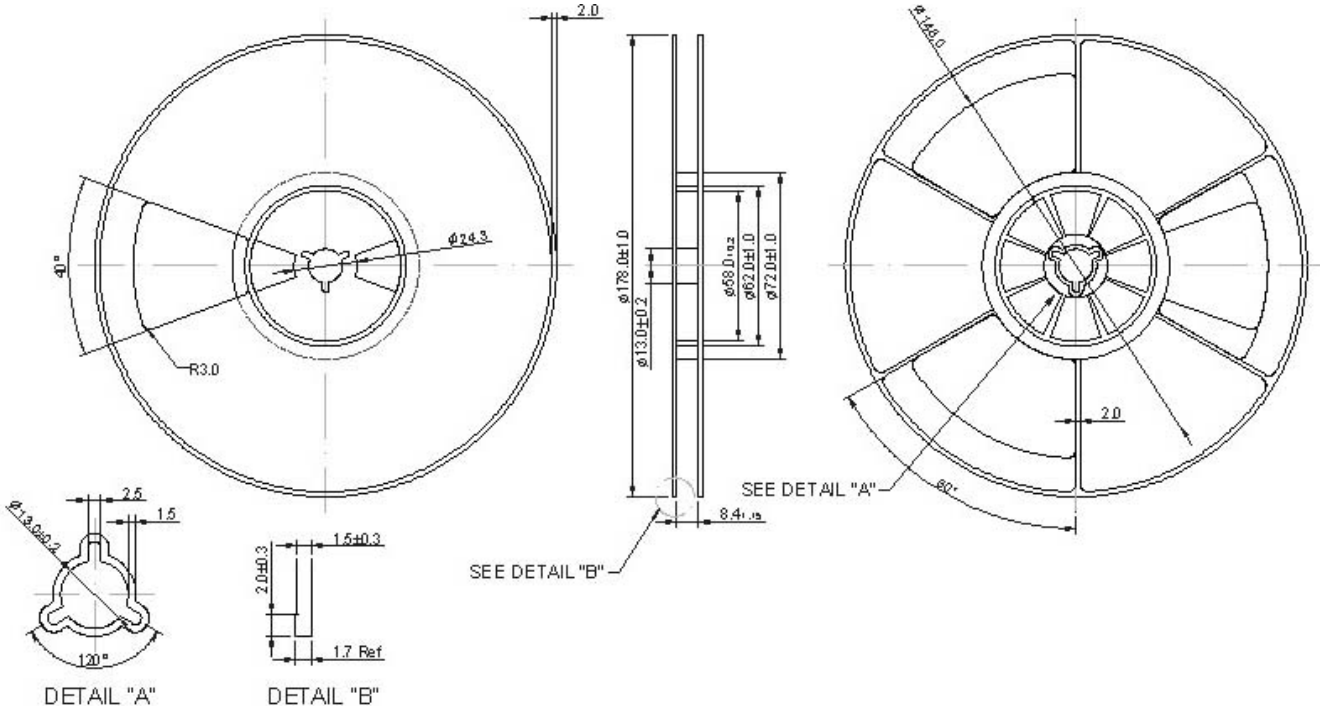


Product date Code (EIAJ):

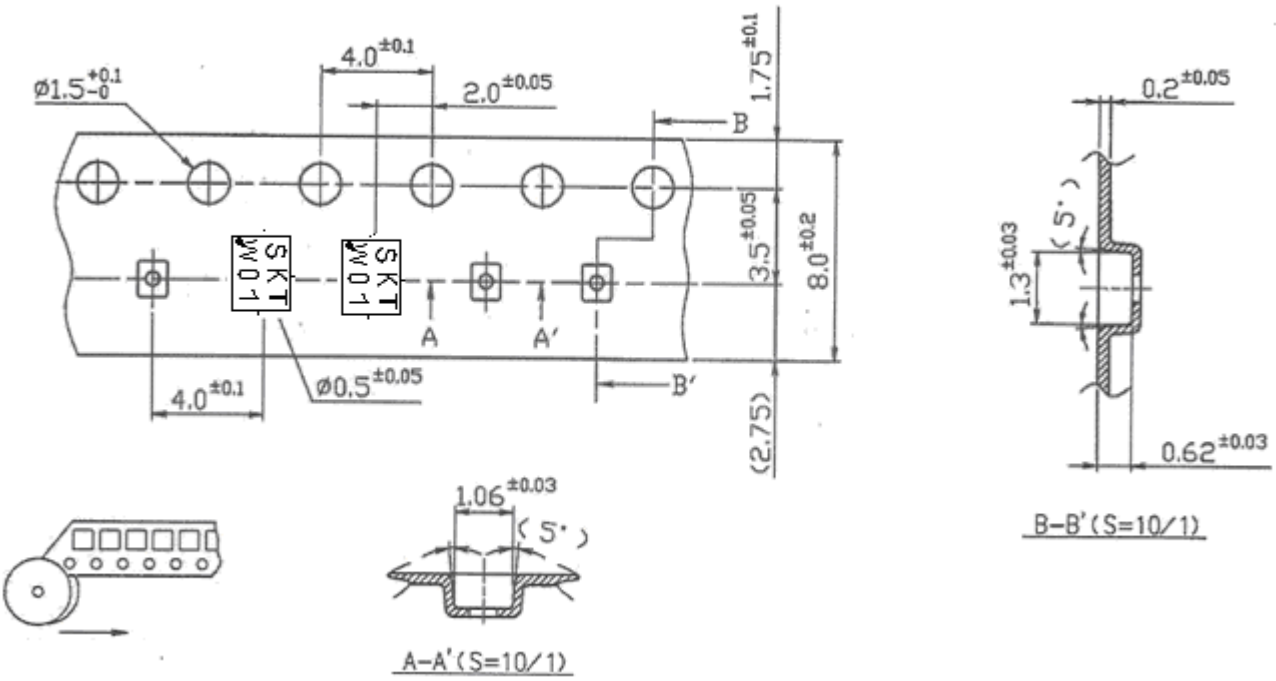
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	a	b	c	d	e	f	g	h	j	k	l	m
2016	n	p	q	r	s	t	u	v	w	x	y	z
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	∇	W	X	Y	Z

F. <u>PACKING</u>:

1. REEL DIMENSION



2. TAPE DIMENSION



G. RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at 150~180℃ for 60~90 seconds.
2. Ascending time to preheating temperature 150℃ shall be 30 seconds min.
3. Heating shall be fixed at 220℃ for 50~80 seconds and at 260℃+0/-5℃ peak (20~40sec).
4. Time: 2 times.