



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 Name: SAW Rx Filter 2140MHz LTE Band 1 SMD 1109

TST Parts No.: TA1699A

Customer Part No.: _____

Customer signature required

Company: _____

Division: _____

Approved by : _____

Date: _____

Checked by: _____ Andy Yu 

Approved by: _____ Bob Chau 

Date: _____ 2017, 04. 05

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 2140MHz LTE Band 1 SMD 1109 (60MHz BW)

MODEL NO.: TA1699A

REV. No.: 2

A. MAXIMUM RATING:

1. Maximum Input Power: 15 dBm
2. DC voltage: 0 V
3. Operating Temperature: -30°C to +85°C
4. Storage Temperature: -40°C to +85°C
5. Moisture Sensitivity Level: Level 1
6. ESD 50V(MM) 100V(HBM)

RoHS Compliant
Lead free
Lead-free soldering

Electrostatic Sensitive Device (ESD)

B. ELECTRICAL CHARACTERISTICS:

Terminating source impedance: $Z_s = 50 \Omega$ (Unbalanced)

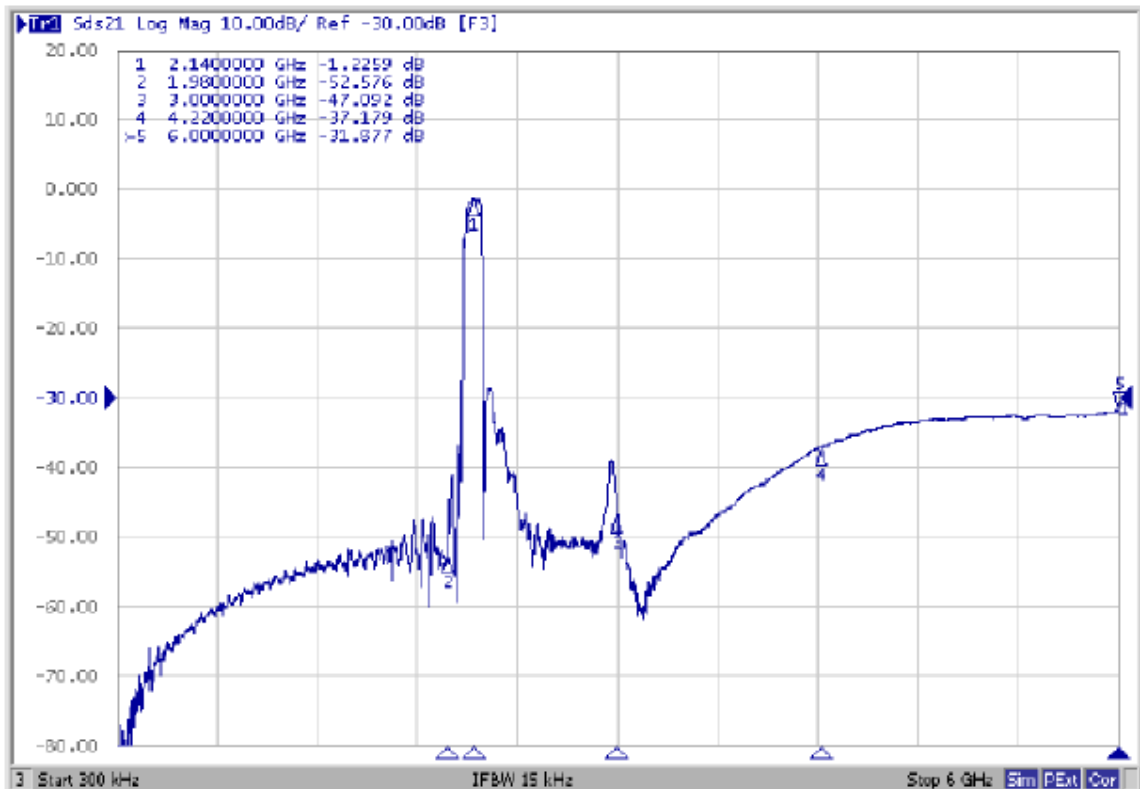
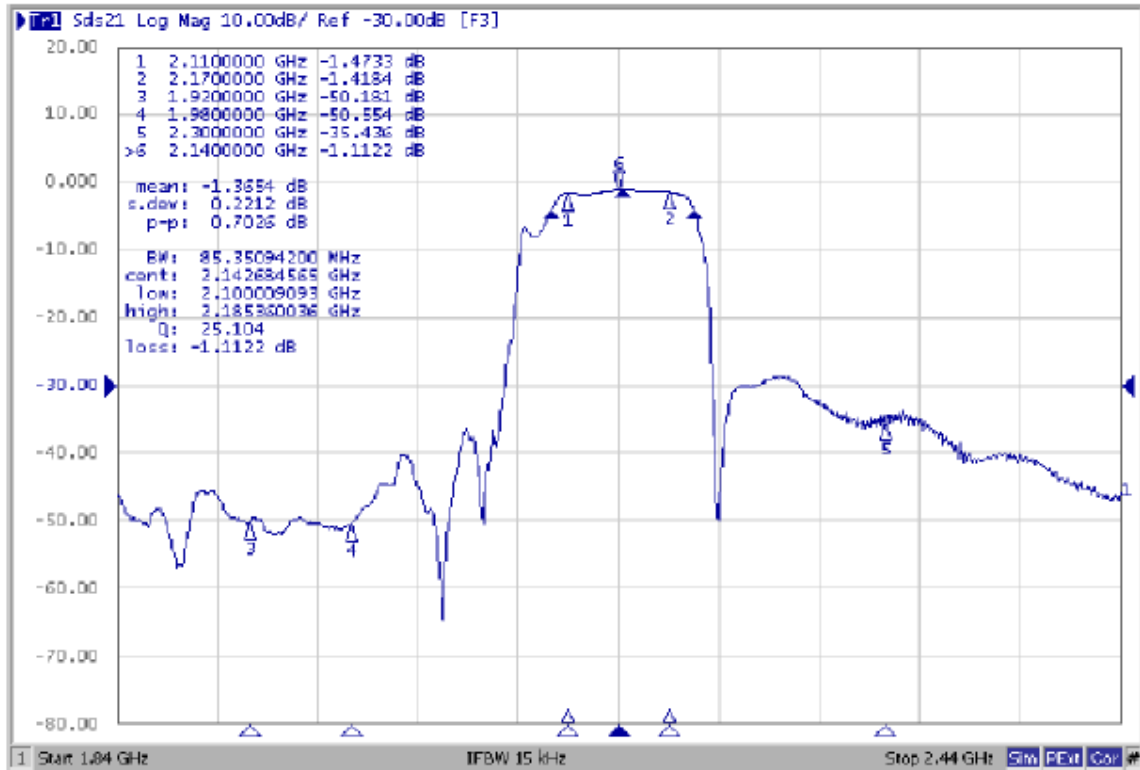
Terminating load impedance: $Z_L = 100 \Omega$ (Balanced / differential)

Parameters Description(Band 1)		Unit	Min.	Typ.	Max.	Remark
Center Frequency (Fo)		MHz	-	2140	-	
Insertion Loss	2110.0 ~ 2170.0 MHz	dB	-	1.7	2.2	
Amplitude Ripple	2110.0 ~ 2170.0 MHz	dB _{p-p}	-	0.6	1.5	
VSWR	2110.0 ~ 2170.0 MHz	-	-	1.9	2.2	
Amplitude balance	2110.0 ~ 2170.0 MHz	dB	-1.5	-0.3 ~ +0.8	+1.5	
Phase balance	2110.0 ~ 2170.0 MHz	deg	-10	-3 ~ +6	+10	
Parameters Description(Band 1)		Unit	Min.	Typ.	Max.	Remark
Center Frequency (Fo)		MHz	-	2132	-	
Insertion Loss	2110.0 ~ 2155.0 MHz	dB	-	1.7	2.2	
Amplitude Ripple	2110.0 ~ 2155.0 MHz	dB _{p-p}	-	0.6	1.5	
VSWR	2110.0 ~ 2155.0 MHz	-	-	1.9	2.2	
Amplitude balance	2110.0 ~ 2155.0 MHz	dB	-1.5	-0.3 ~ +0.8	+1.5	
Phase balance	2110.0 ~ 2155.0 MHz	deg	-10	-3 ~ +6	+10	
Attenuation:						
10.0 ~ 1920.0 MHz		dB	40	48	-	
824.0 ~ 849.0 MHz		dB	50	61	-	
1710.0 ~ 1755.0 MHz		dB	45	54	-	
1920.0 ~ 1980.0 MHz		dB	50	55	-	
2300.0 ~ 2500.0 MHz		dB	25	35	-	
4220.0 ~ 4340.0 MHz		dB	35	50		

Notes : (1) No Matching Network .

C. Frequency Characteristics :

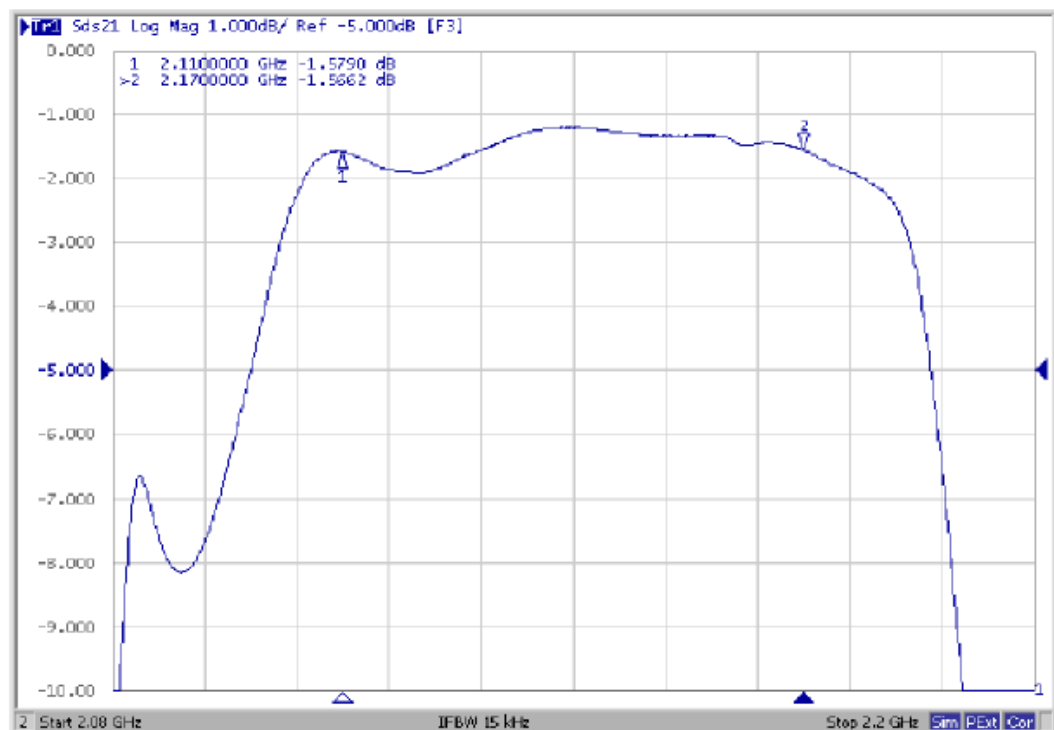
Frequency Response



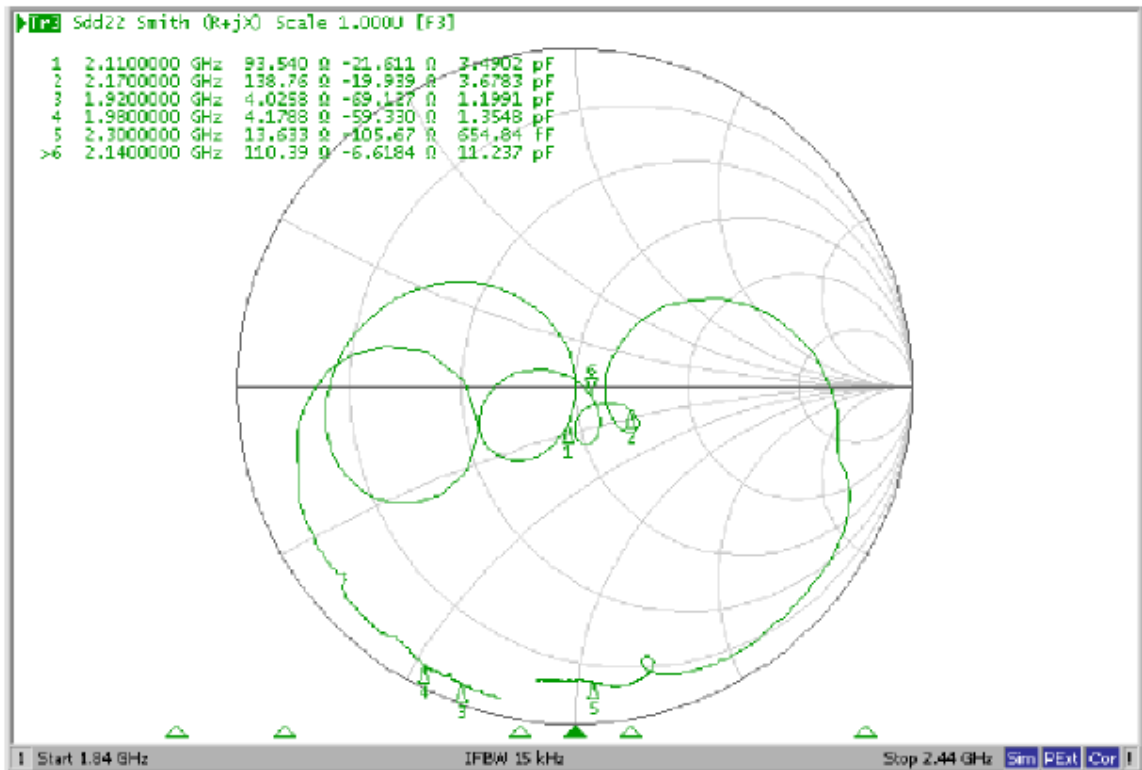
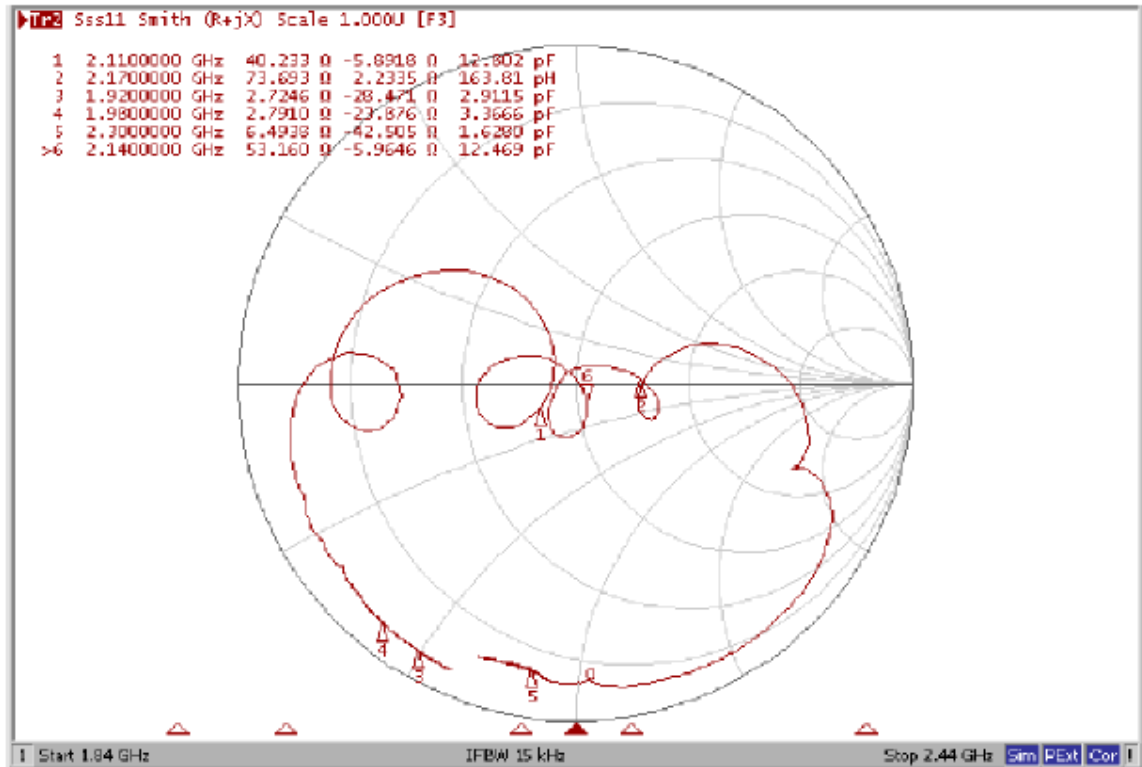
VSWR



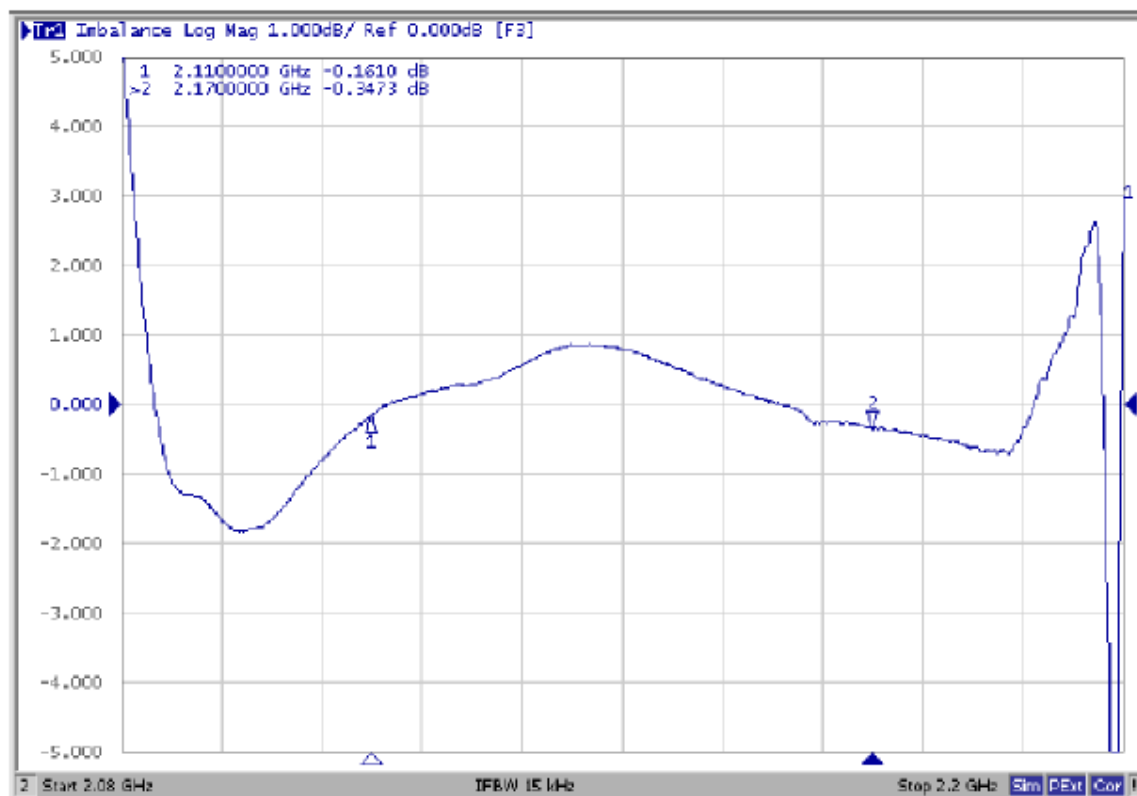
Ripple



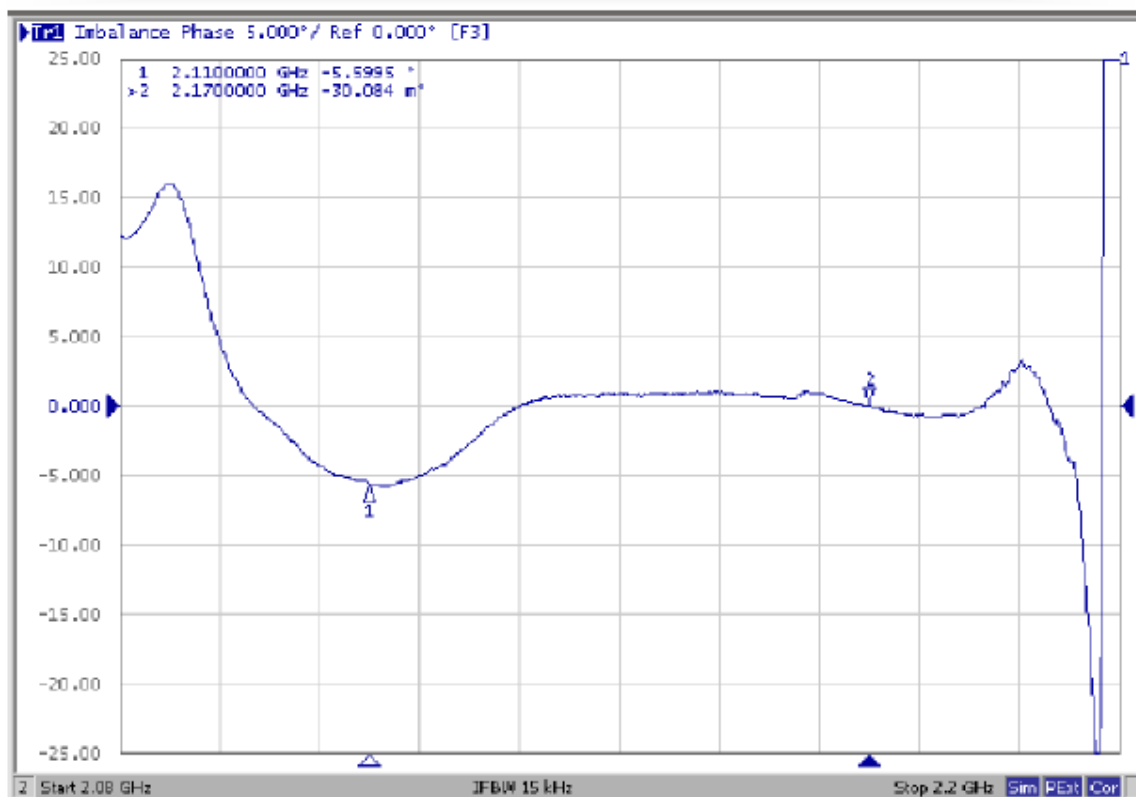
Smith Chart



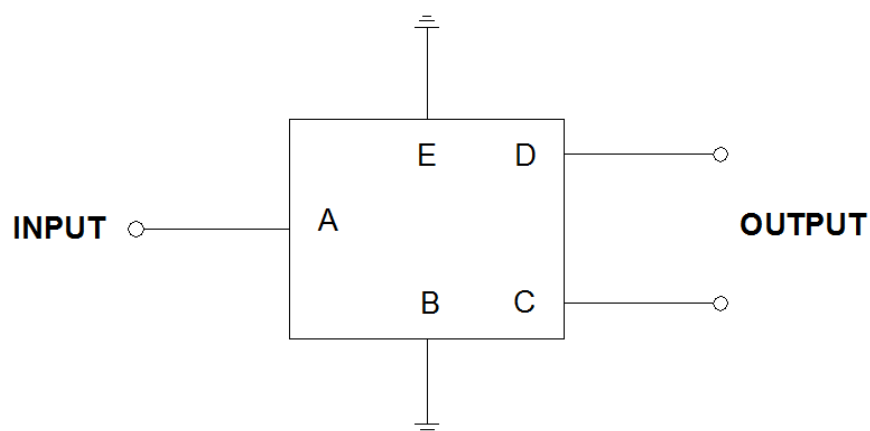
Amplitude balance



Phase balance



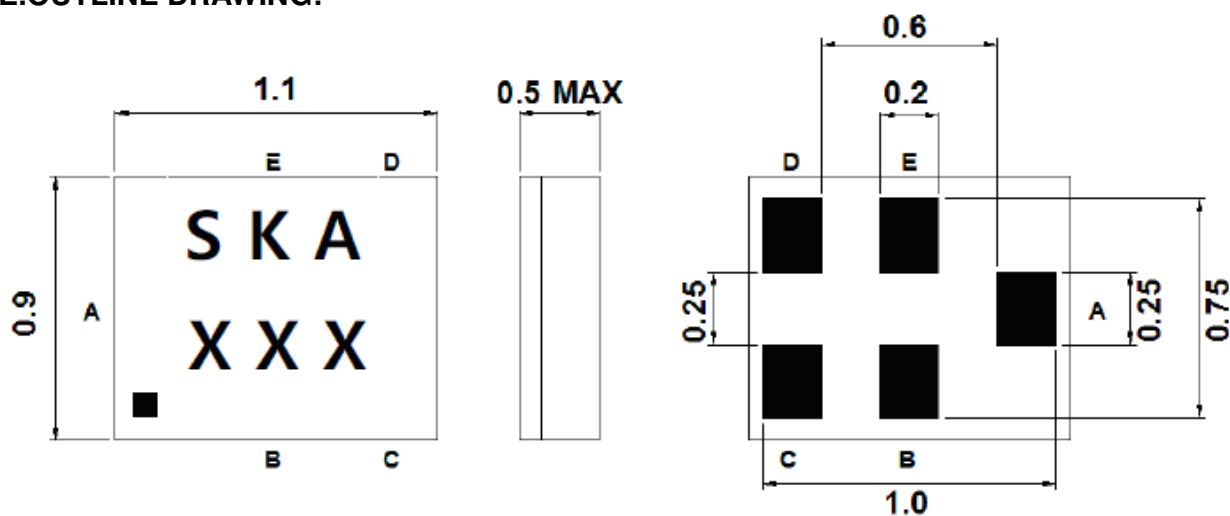
D. MEASUREMENT CIRCUIT:



Source Impedance: 50 Ω

Load Impedance: 100 Ω

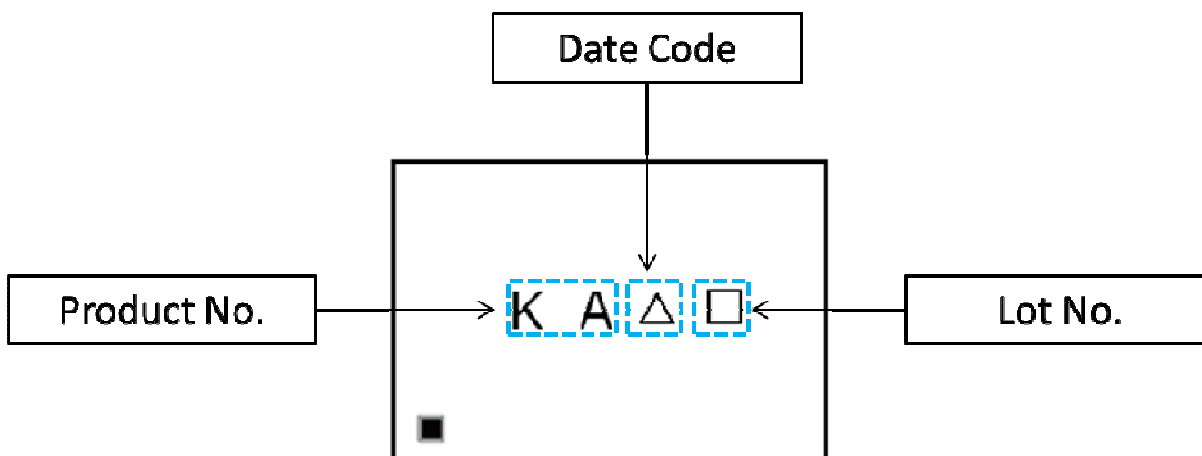
E. OUTLINE DRAWING:



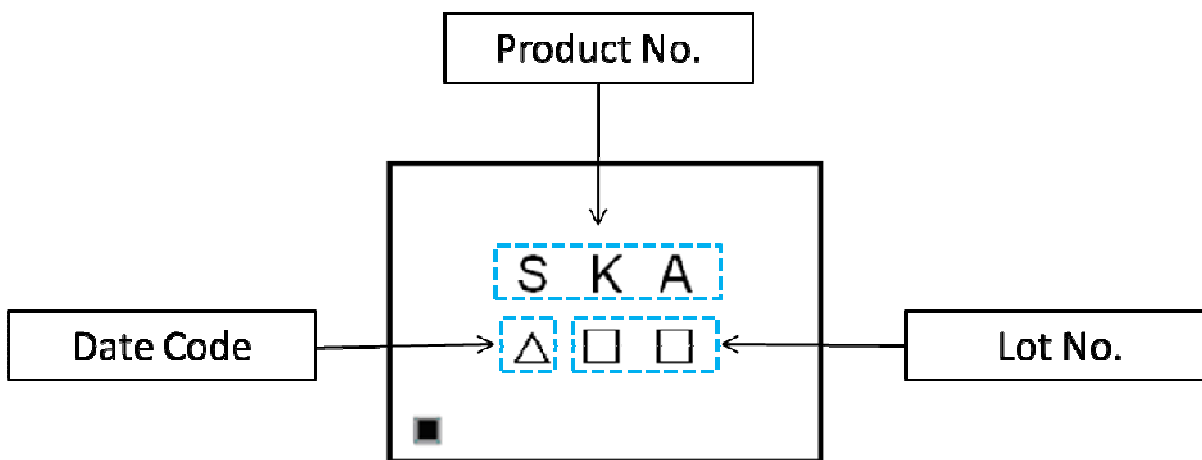
Marking Descriptions	
S	Product Lots
KA	Series Number
XXX	Date Code(Year+Month+LOT)

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

Top View (Sample Production):



Top View (Mass Production):



△ : Date Code

□ : Lot No. (Indicated by 0~9 or A to Z and a to z, except I, O, i, o and l)

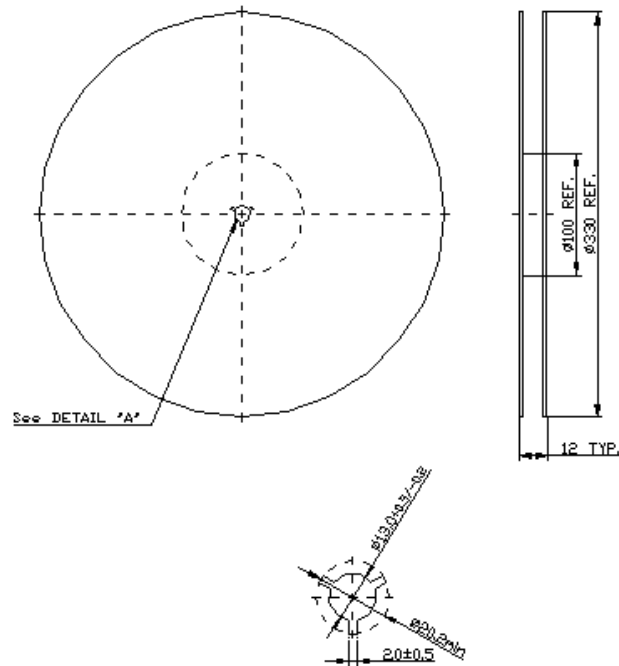
Product date Code (EIAJ)

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	V	W	X	Y	Z

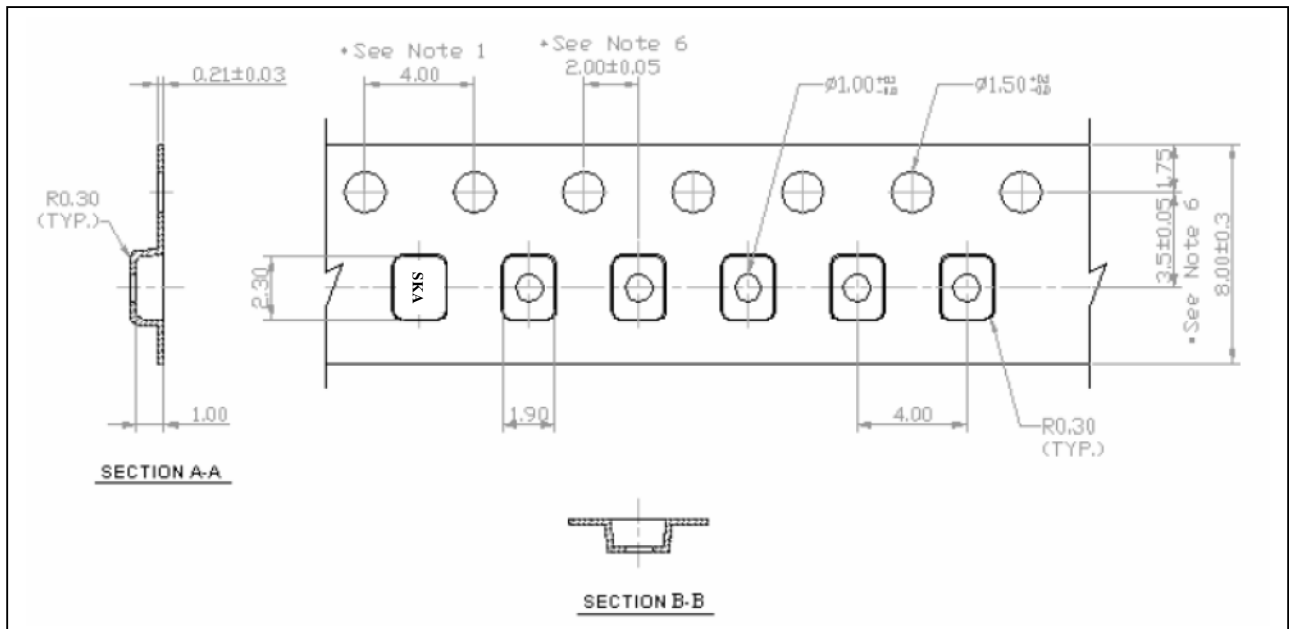
F. PACKING:

1. REEL DIMENSION

(Please refer to FR-75D10 for packing quantity)



2. TAPE DIMENSION



G. RECOMMENDED REFLOW PROFILE :

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

