

MAXIMUM RATING:

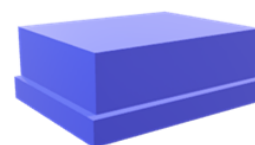
- Operating temperature range: -30 °C to +90 °C
- Storage temperature range: -40 °C to +100 °C
- Maximum Input Power: +10 dBm
- Maximum DC Voltage: +/-5 V
- Moisture Sensitivity Level: Level 1
- ESD 50V(MM) 100V(HBM)

ELECTRICAL CHARACTERISTICS:

Terminating source impedance: $Z_s = 50 \Omega$ (Single-ended)

Terminating load impedance: $Z_L = 50 // 4.7nH \Omega$ (Single-ended)

**1960 MHz
SAW Filter**



SM1109

Parameters Description		Unit	Min.	Typ.	Max.
Center Frequency		MHz	-	1960	-
Insertion Loss(*1)	1930~1990 MHz	dB	-	2.8	4.0
Amplitude ripple	1930~1990 MHz	dB	-	1.3	2.7
VSWR(Input)	1930~1990 MHz	-	-	1.9	2.2
VSWR(Output)	1930~1990 MHz	-	-	2.0	2.3
Attenuation:					
DC~960 MHz		dB	40	45	-
1558~1608 MHz		dB	35	40	-
1710~1850 MHz		dB	35	40	-
1850~1910 MHz		dB	35	39	-
2020~2070 MHz		dB	7	27	-
2070~2400 MHz		dB	25	33	-
2400~2500 MHz		dB	33	43	-
2500~3780 MHz		dB	28	40	-
3780~3980 MHz		dB	30	39	-
3980~5790 MHz		dB	21	31	-
5790~5970 MHz		dB	21	31	-
5970~7720 MHz		dB	21	31	-
7720~7960 MHz		dB	17	27	-
7960~8000 MHz		dB	17	27	-

(*1) Specification of insertion loss excludes loss that comes from the test board.

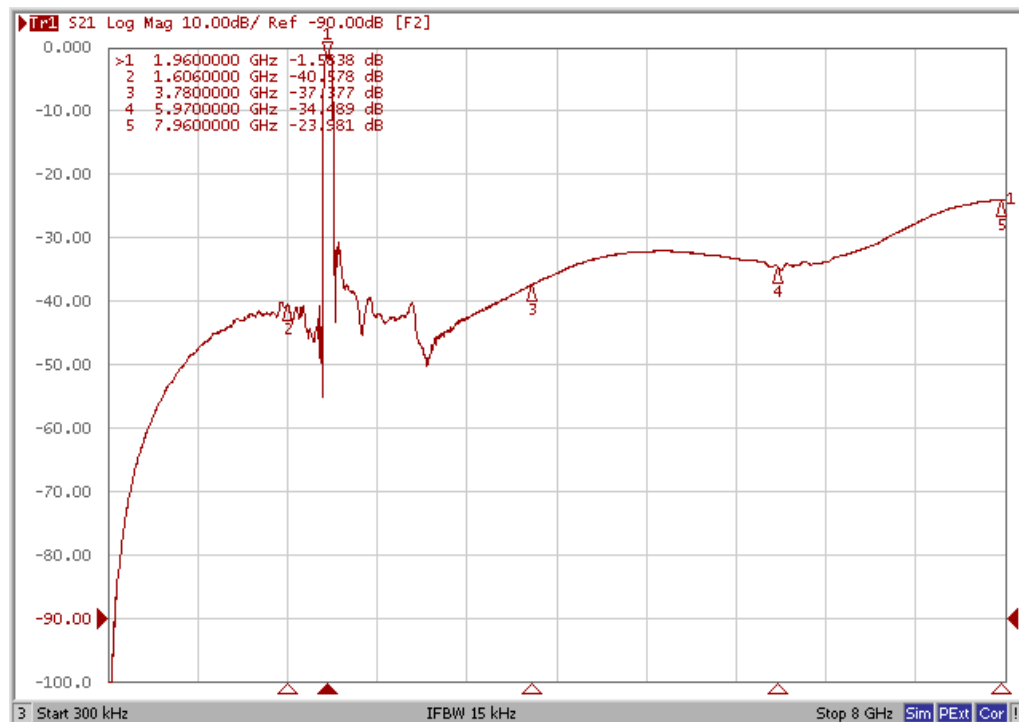
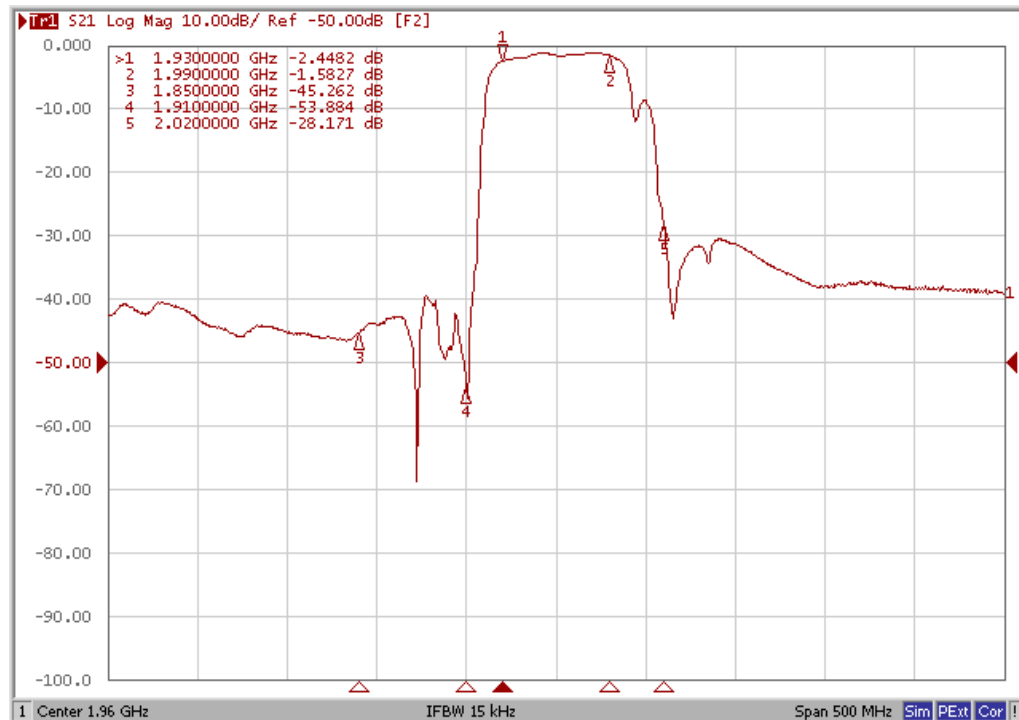


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling. :

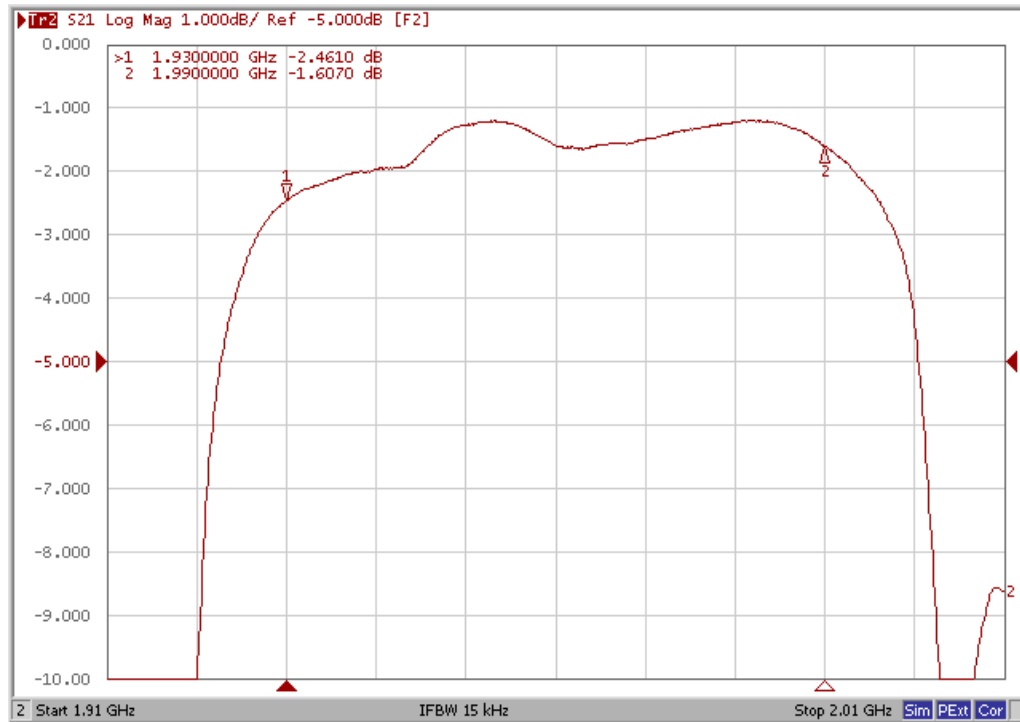
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

FREQUENCY CHARATERISTIC:

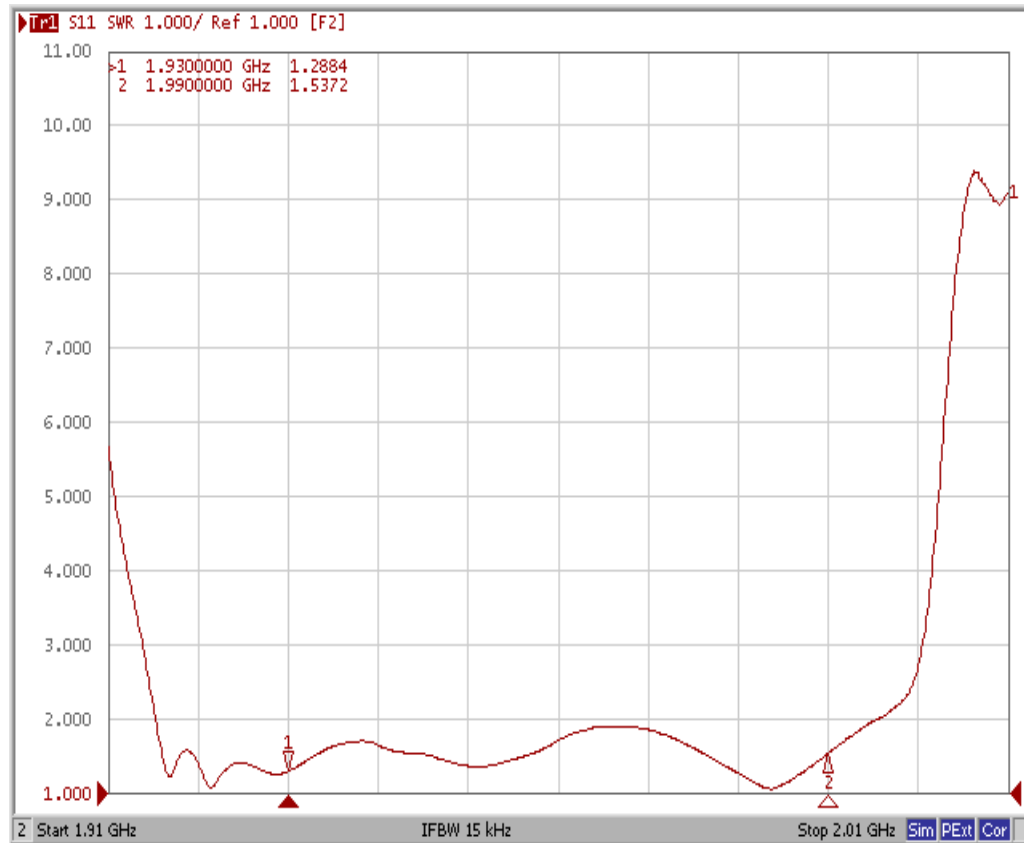
Frequency Response



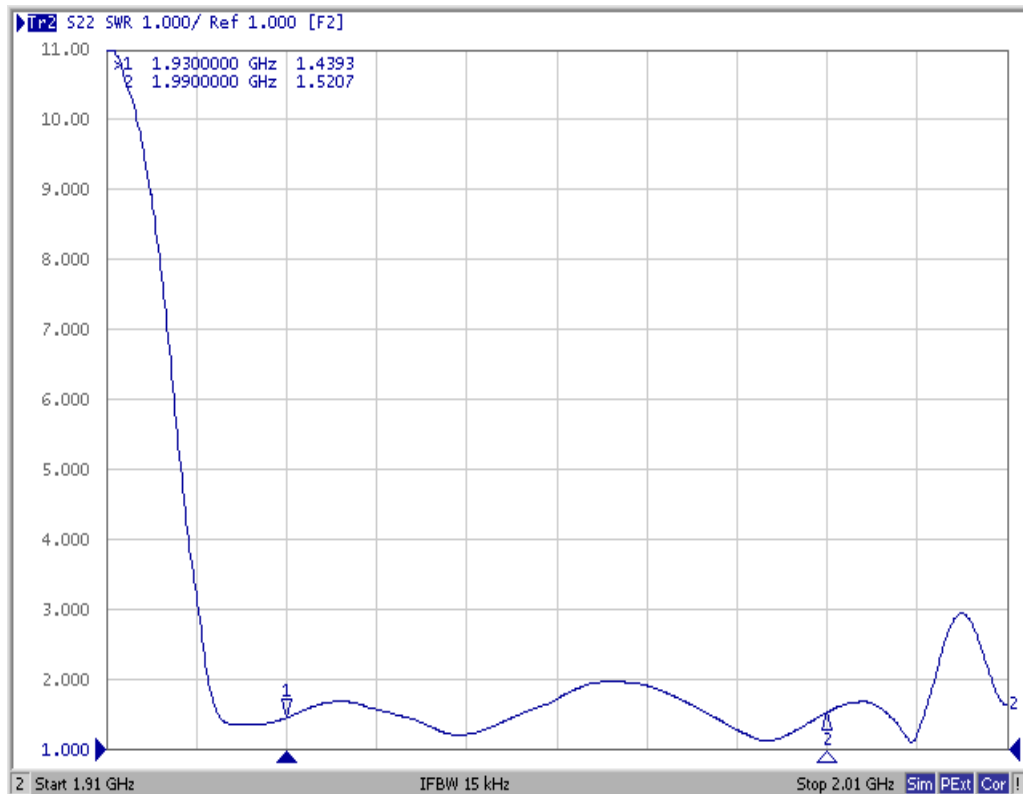
Ripple



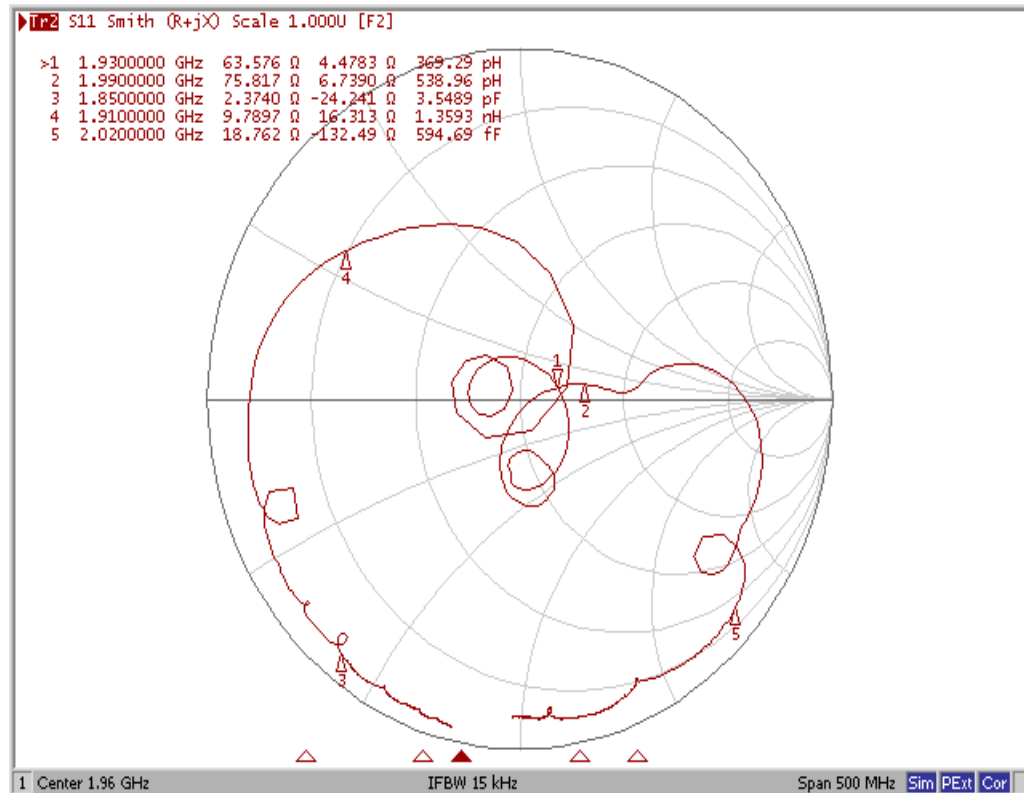
VSWR (S11)



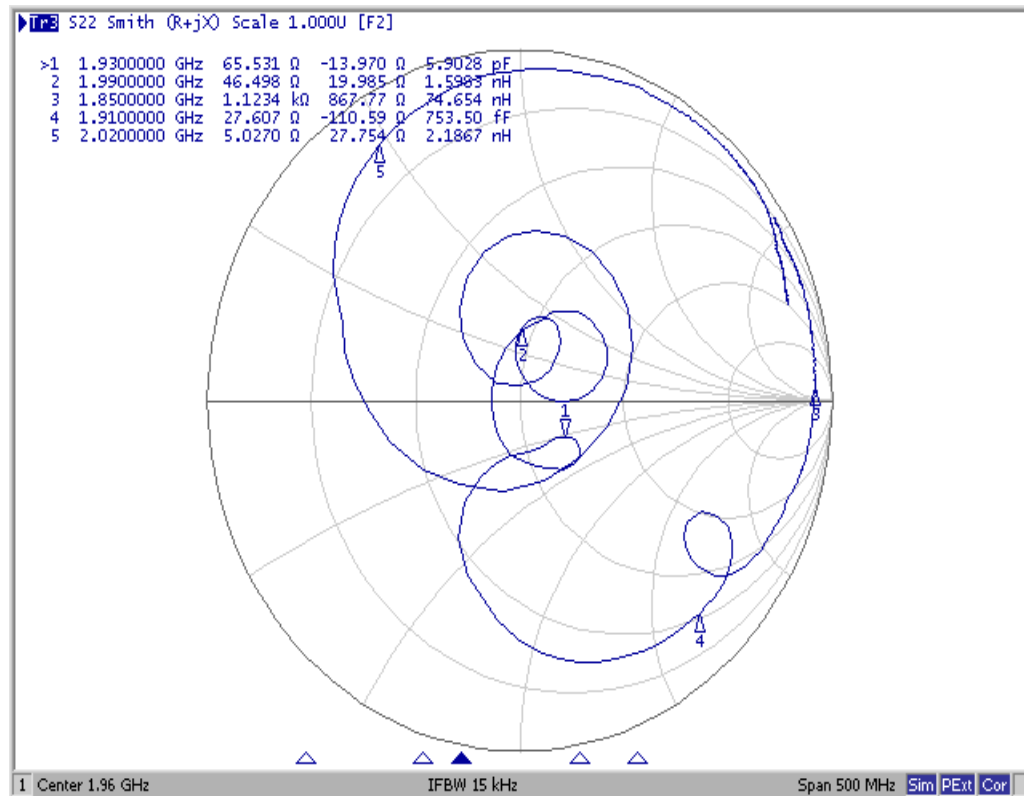
VSWR (S11)



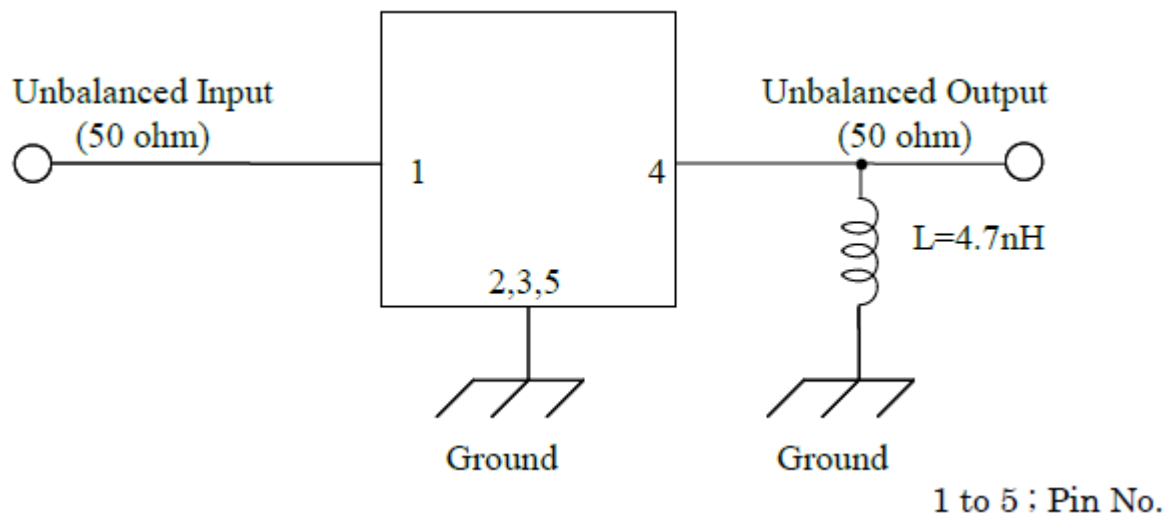
Smith Chart (S11)



Smith Chart (S22)

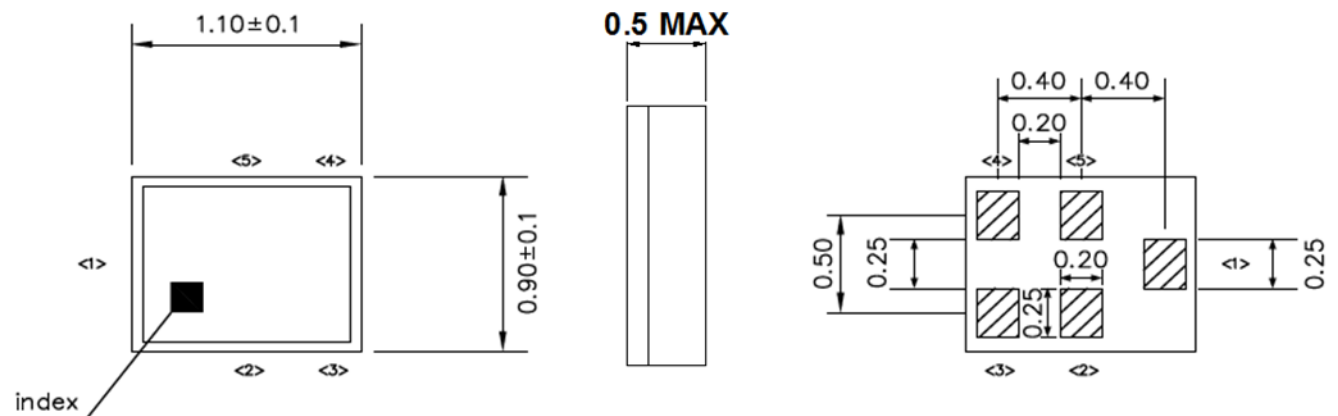


MEASUREMENT CIRCUIT:



OUTLINE DRAWING:

Device size: 1.1typ. x 0.9typ. x 0.5max.

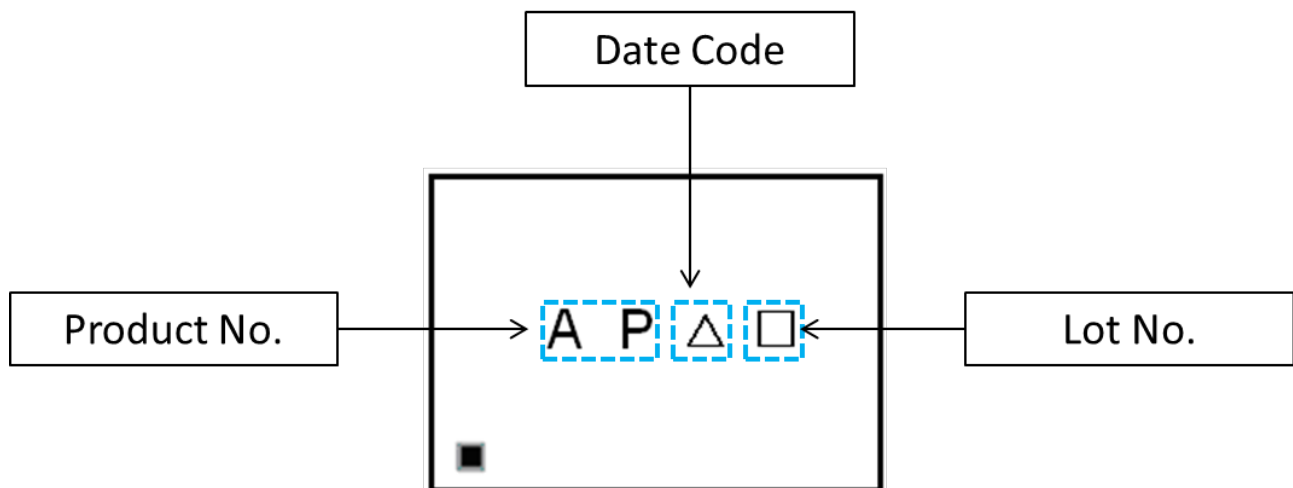


Unit : mm

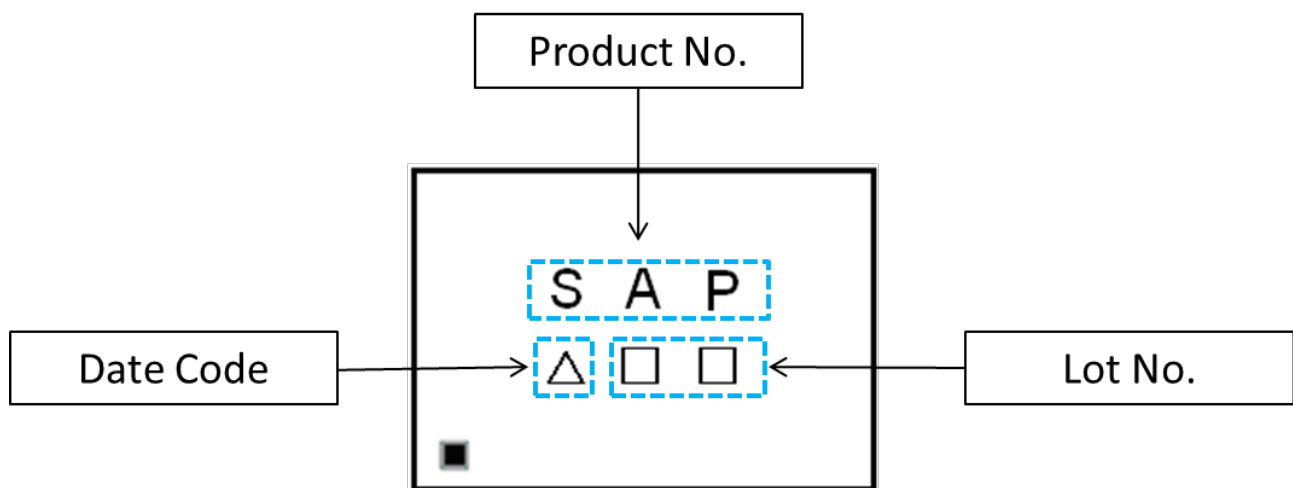
Pin Configuration

Pin No.	Symbol	Function
1	IN	Unbalanced pin
2	GND	Ground
3	GND	Ground
4	OUT	Unbalanced pin
5	GND	Ground

Top View (Sample Production):



Top View (Mass Production):



Δ : Date Code

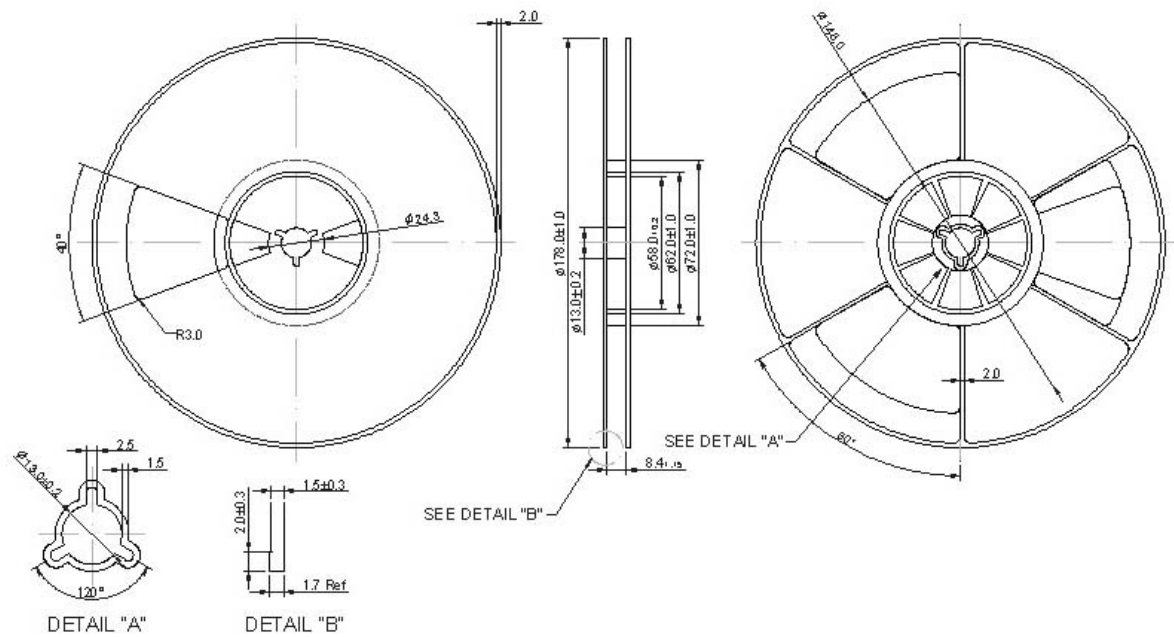
□ : Lot No. (Indicated by 0~9 or A to Z and a to z, except I, O, i, o and l)

Product date Code (EIAJ)

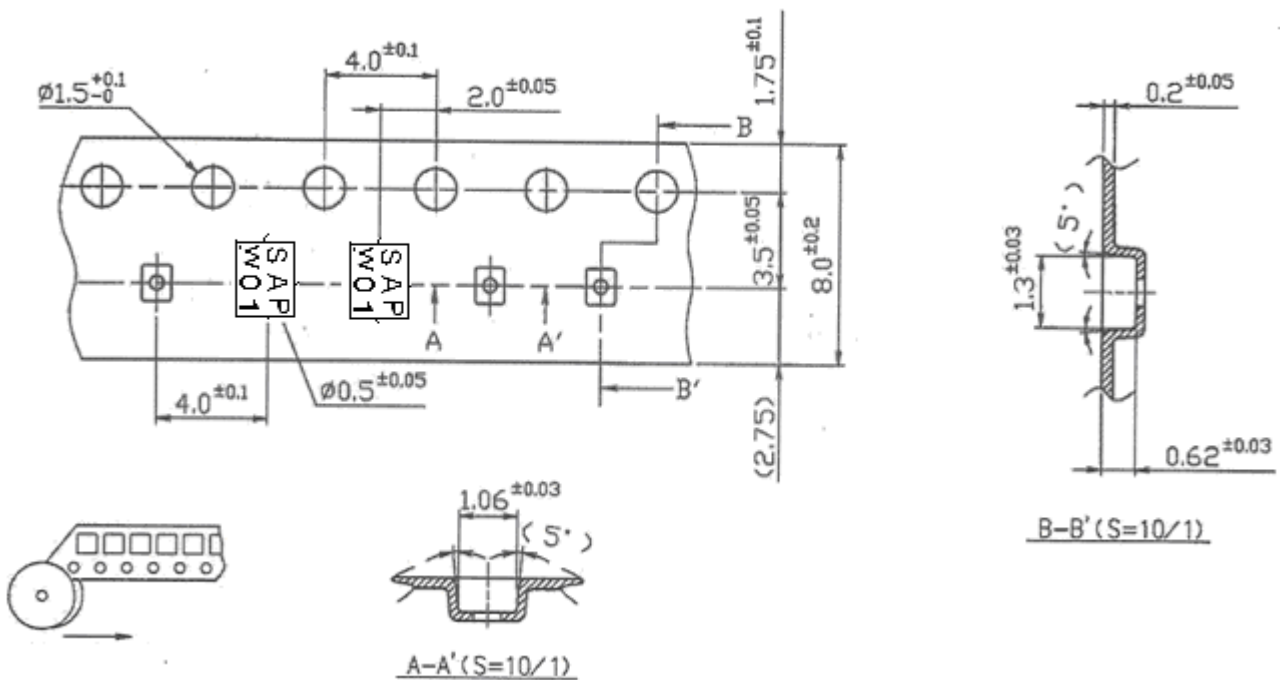
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	a	b	c	d	e	f	g	h	j	k	l	m
2016	n	p	q	r	s	t	u	v	w	x	y	z
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z

**PACKING:
REEL DIMENSION**

Reel Count:
7" = 3000
10" = 10,000



TAPE DIMENSION



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.

