

SM1109

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)

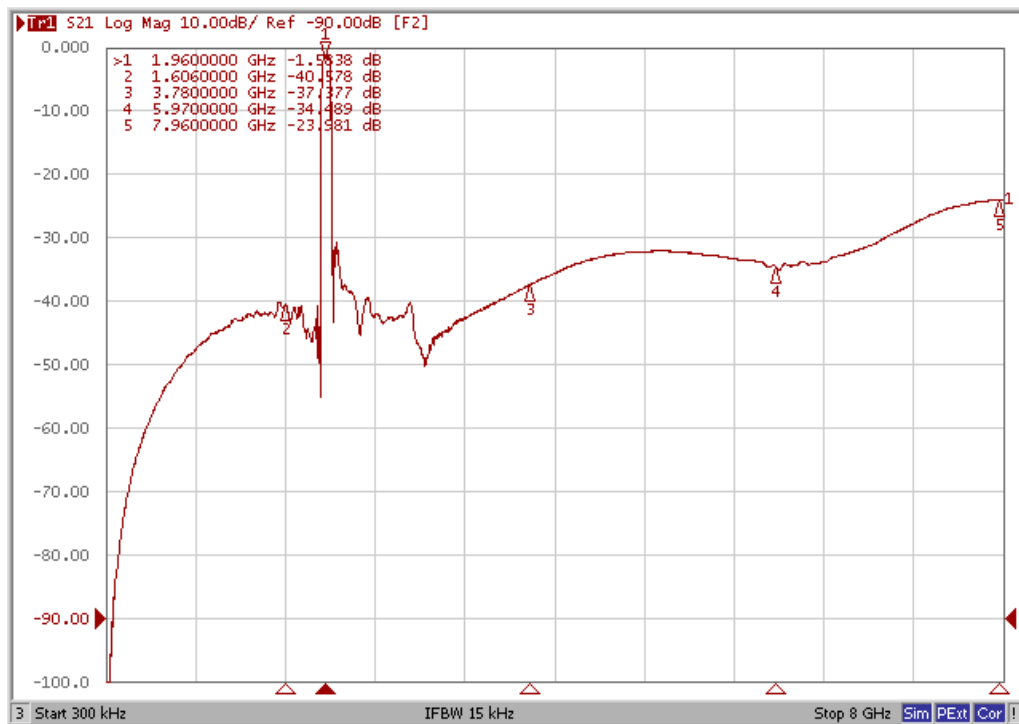
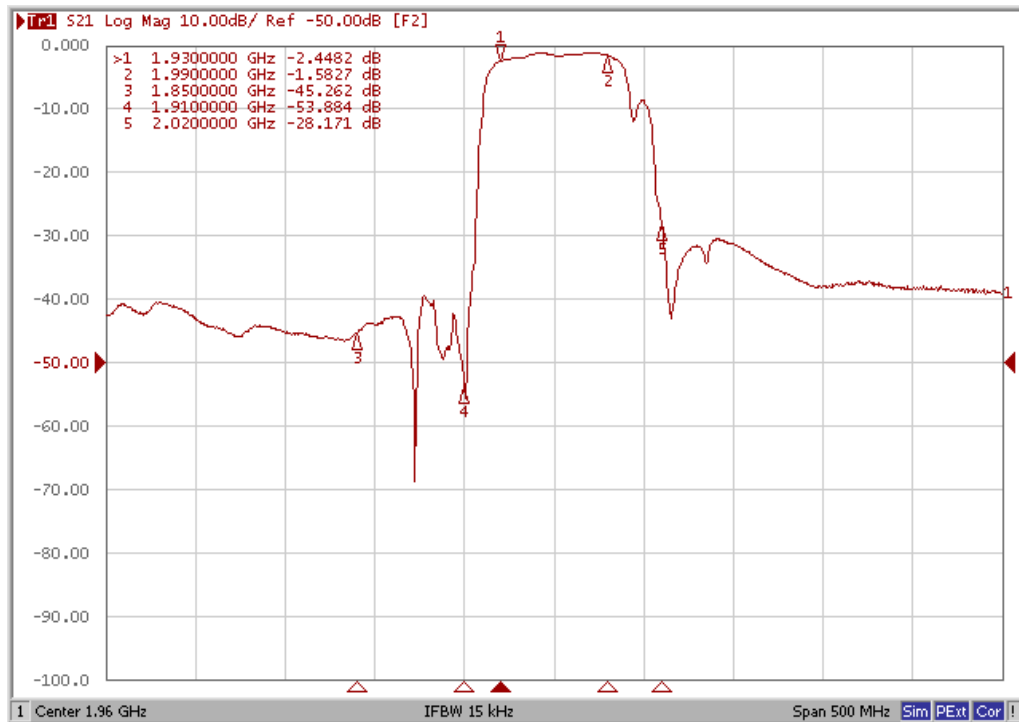
Terminating load impedance: $Z_L = 50//4.7nH \Omega$ (Single-ended)

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	-

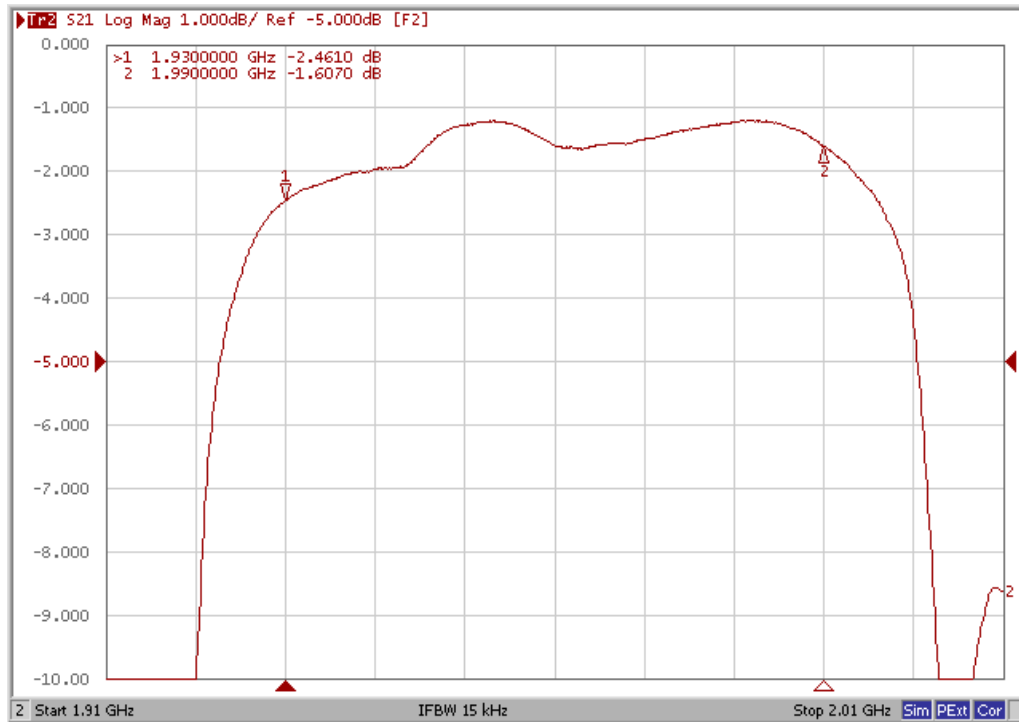
(*1) Specification of insertion loss excludes loss that comes from the test board.

FREQUENCY CHARACTERISTIC:

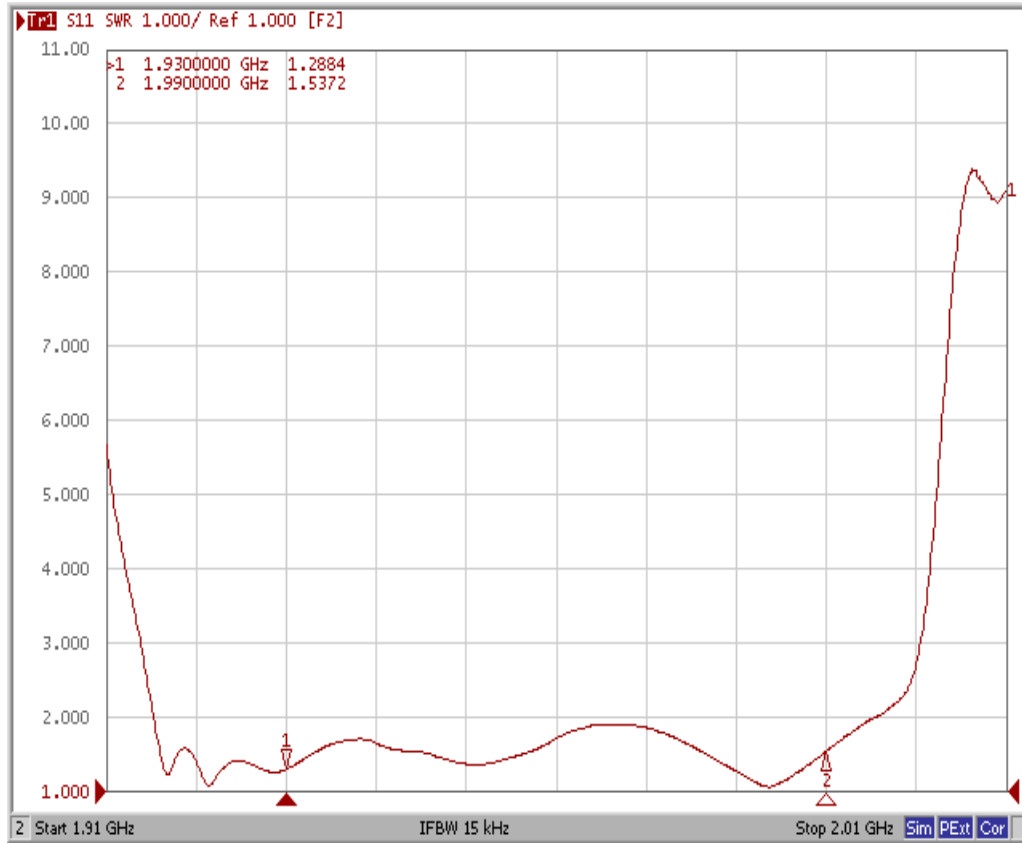
Frequency Response



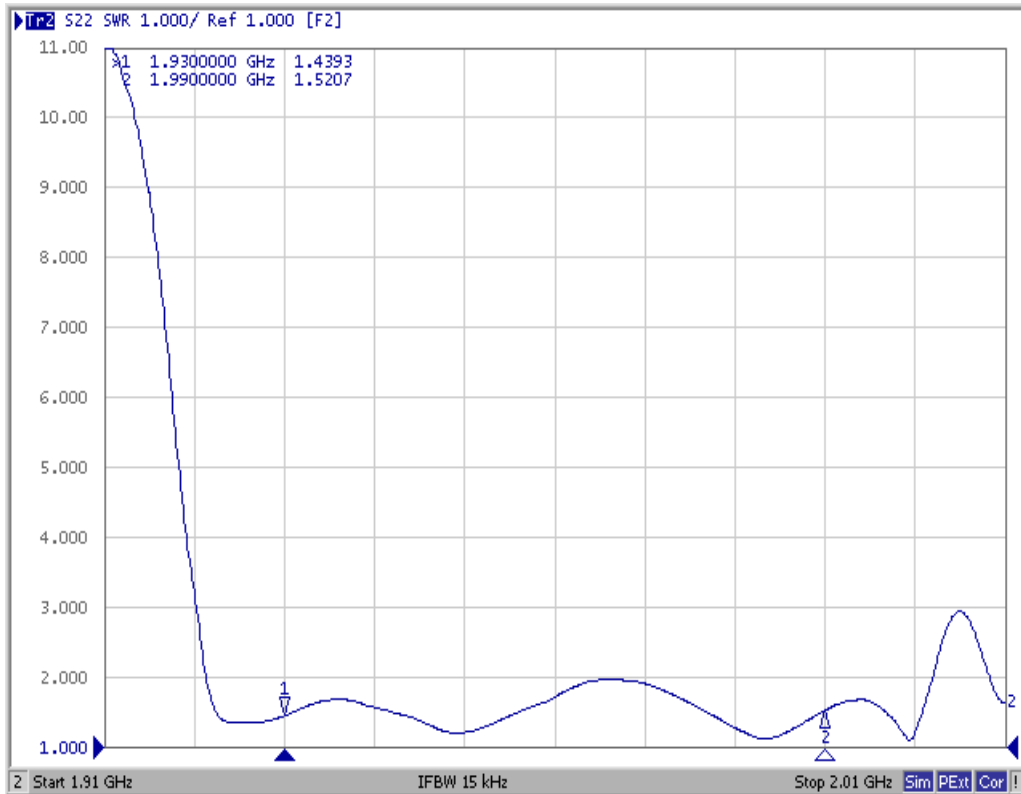
Ripple



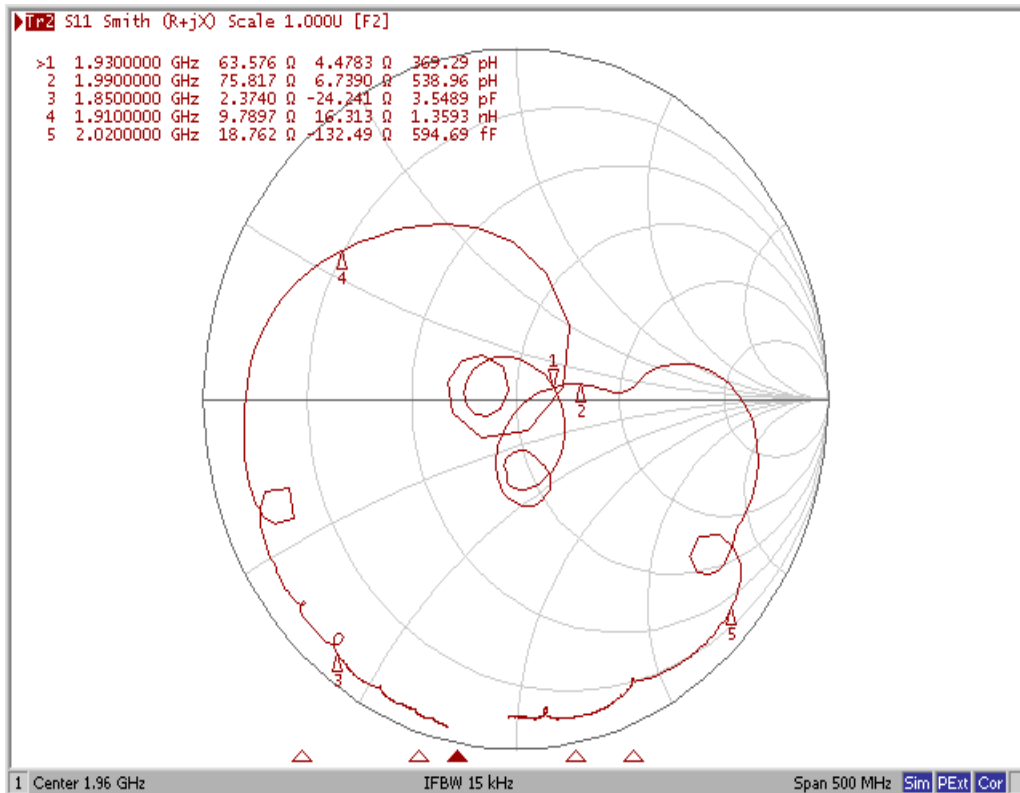
VSWR (S11)



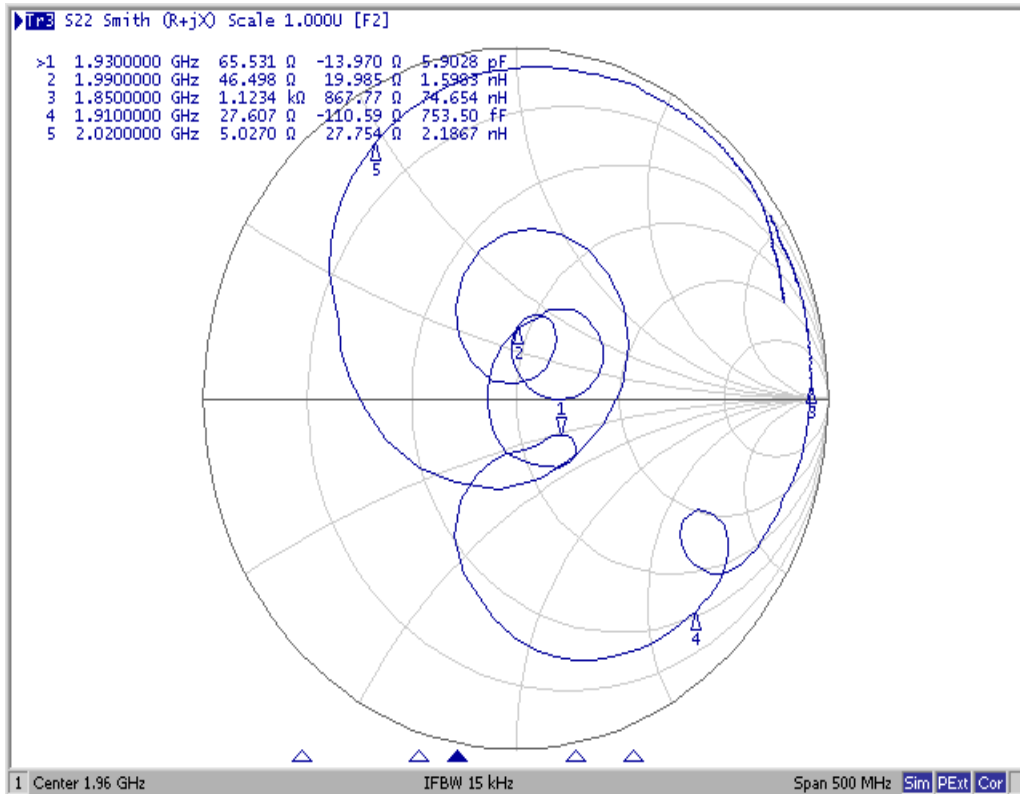
VSWR (S11)



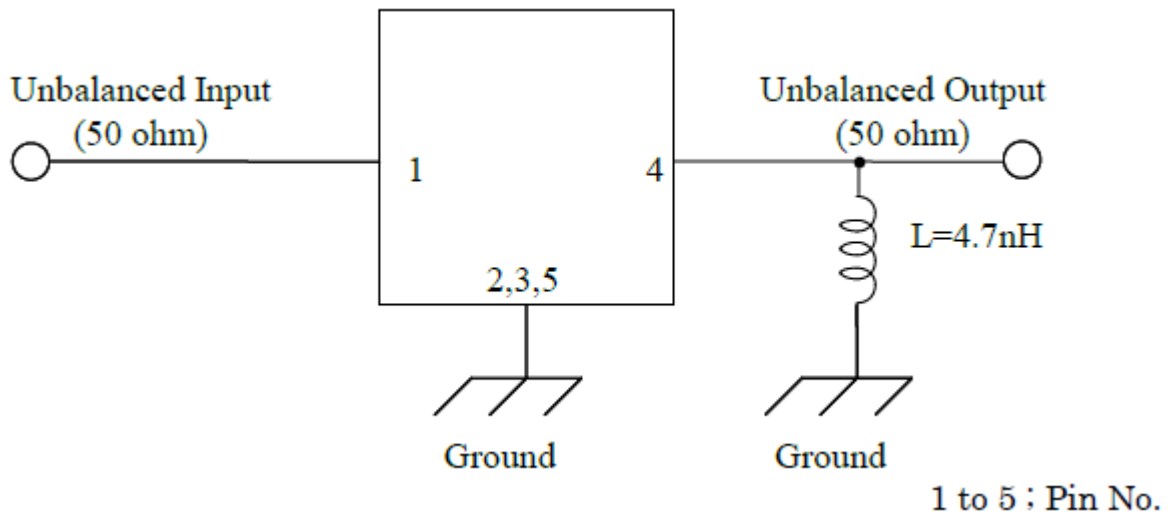
Smith Chart (S11)



Smith Chart (S22)

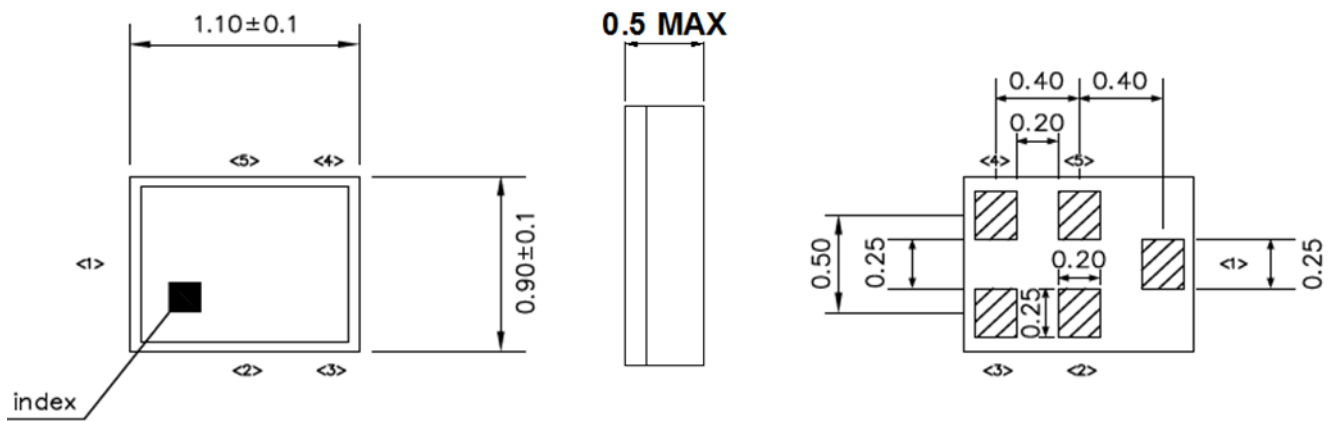


MEASUREMENT CIRCUIT:



OUTLINE DRAWING:

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

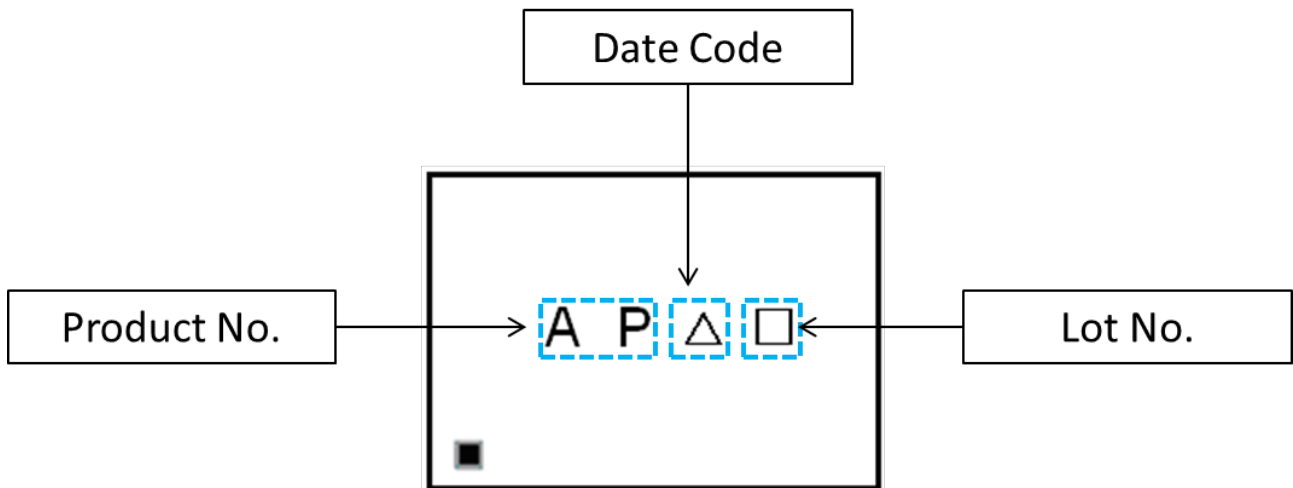


Unit : mm

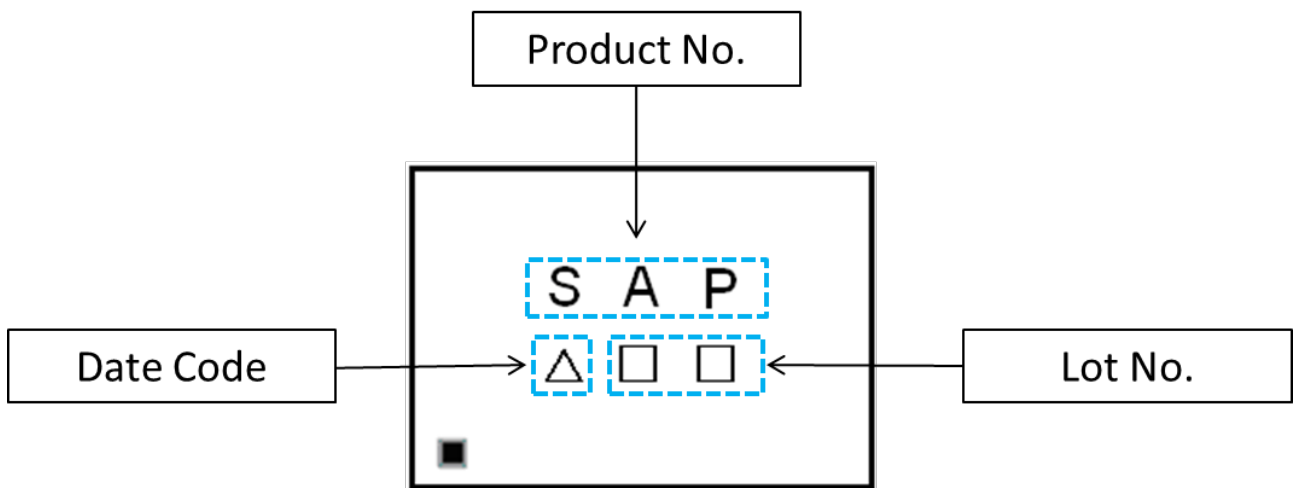
Pin Configuration

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):



△ : Date Code

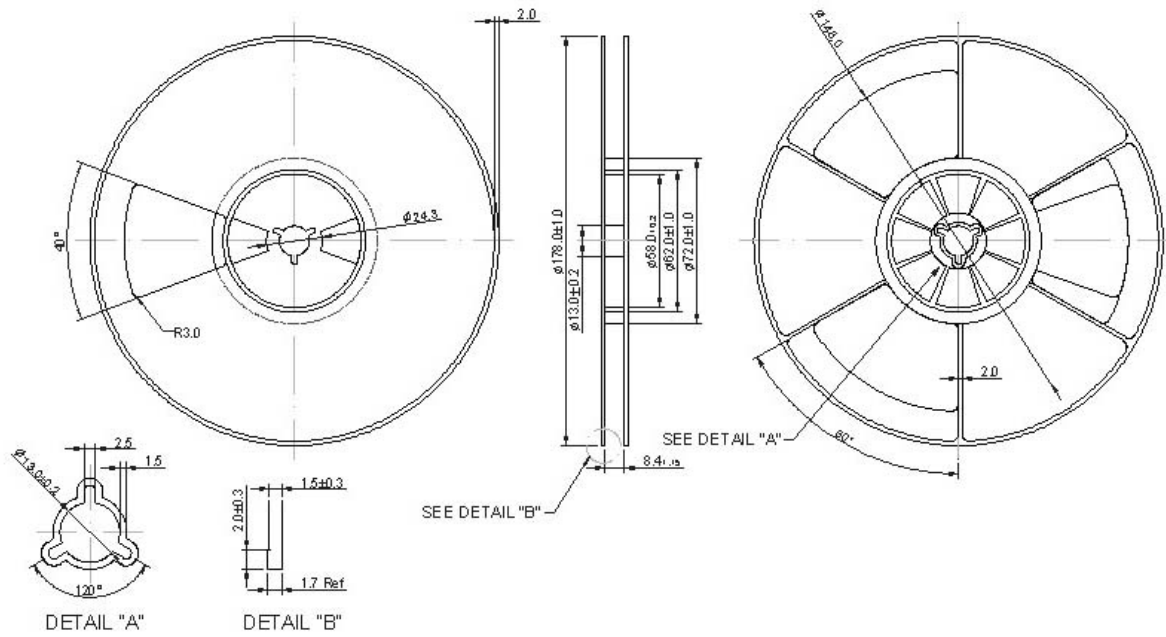
□ : Lot No. (Indicated by 0~9 or A to Z and a to z, except I, O, i, o and l)

Product date Code (EIAJ)

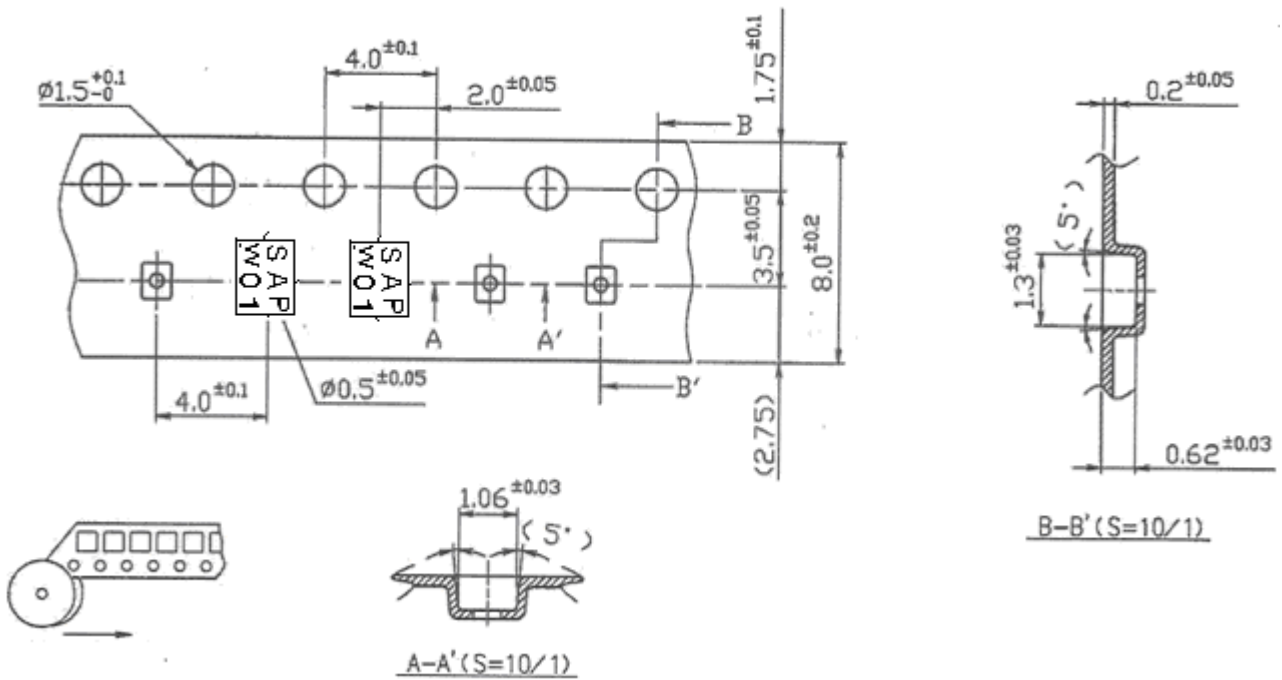
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	a	b	c	d	e	f	g	h	j	k	l	m
2016	n	p	q	r	s	t	u	v	w	x	y	z
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z

**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.

