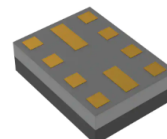


SF2709J-1

**1222.5/1582.5 MHz
SAW Diplexer**



SM1511-10

MAXIMUM RATING:

- Input Power Level: 15 dBm
- DC Voltage : 0 V
- Operating Temperature: -40°C to +105°C
- Storage Temperature: -40°C to +105°C
- Moisture Sensitive Level: MSL 1
- AEC-Q200 Qualified

ELECTRICAL CHARACTERISTICS:

Terminating source impedance (single) : $Z_s = 50 \Omega$
 Terminating load impedance (single) : $Z_L = 50 \Omega$

Item (L2 Band to Antenna)	Unit	Min.	Typ.	Max.
Center frequency	MHz	-	1222.5	-
Insertion Loss (1196 ~ 1249 MHz)	dB	-	3.4	3.8
Group Delay Ripple (1197.14 ~ 1217.14 MHz)	ns		5.2	10
Group Delay Ripple (1221.6 ~ 1233.6 MHz)	ns		1.5	5
Group Delay Ripple (1240 ~ 1252 MHz)	ns		2.8	10
Amplitude Ripple (1196 ~ 1249 MHz)	dB	-	0.8	2.0
Attenuation (reference level from 0 dB)				
880 ~ 920 MHz	dB	20	45	-
1565 ~ 1606 MHz (L1 Band)	dB	20	33	-
1710 ~ 1850 MHz	dB	20	28	-
1850 ~ 1920 MHz	dB	20	32	-
1920 ~ 1980 MHz	dB	20	33	-
Temperature Coefficient of Frequency	ppm/K	-	-36	-



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

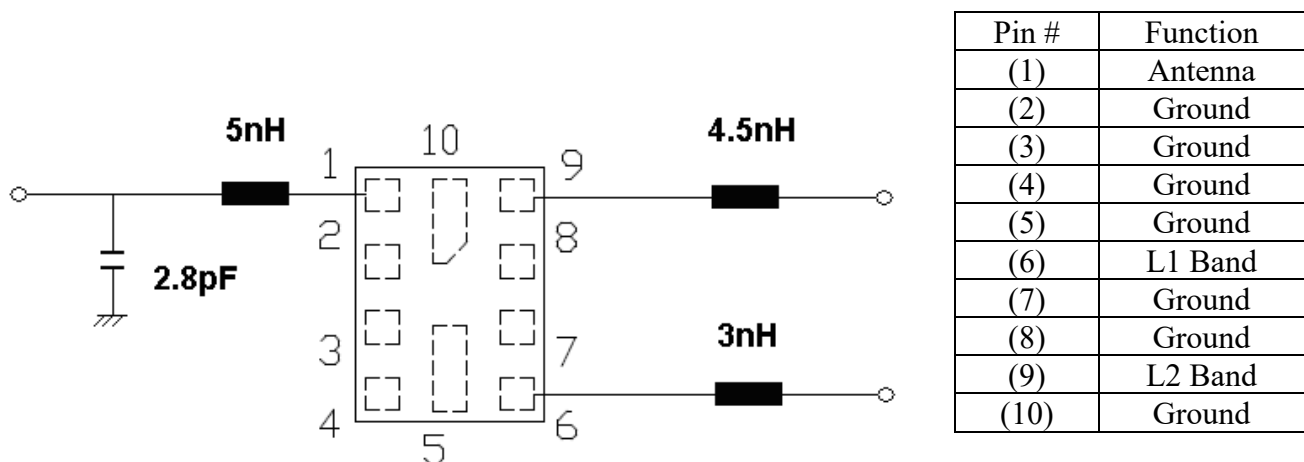
NOTES:

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.

Item (L1 Band to Antenna)	Unit	Min.	Typ.	Max.
Center frequency	MHz	-	1582.5	-
Insertion Loss (1559 ~ 1606 MHz)	dB	-	3.4	3.7
Group Delay Ripple (1559 ~ 1606 MHz)	ns		5	15
Amplitude Ripple (1559 ~ 1606 MHz)	dB	-	0.7	2.0
Attenuation (reference level from 0 dB)				
10 ~ 920 MHz	dB	28	42	-
1196 ~ 1249 MHz (L2 Band)	dB	30	38	-
1427 ~ 1453 MHz	dB	25	32	-
1453 ~ 1501 MHz	dB	20	27	-
1501 ~ 1525 MHz	dB	10	16	-
1710 ~ 1785 MHz	dB	20	31	-
1850 ~ 1980 MHz	dB	30	39	-
Temperature Coefficient of Frequency	ppm/K	-	-36	-

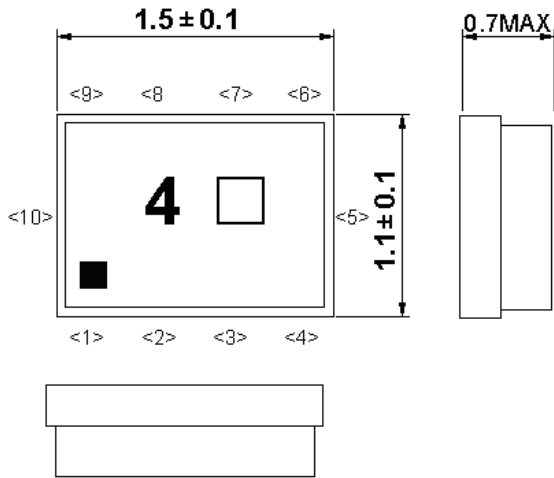
Item (Isolation)	Unit	Min.	Typ.	Max.
Attenuation (reference level from 0 dB)				
1196 ~ 1249 MHz (L2 Band)	dB	35	38	-
1565 ~ 1606 MHz (L1 Band)	dB	35	38	-
Temperature Coefficient of Frequency	ppm/K	-	-36	-

TEST CIRCUIT: Simulation matching port extensions 90ps

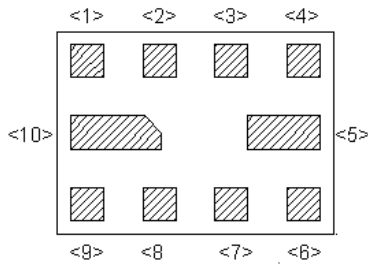


Pin #	Function
(1)	Antenna
(2)	Ground
(3)	Ground
(4)	Ground
(5)	Ground
(6)	L1 Band
(7)	Ground
(8)	Ground
(9)	L2 Band
(10)	Ground

OUTLINE DRAWING:

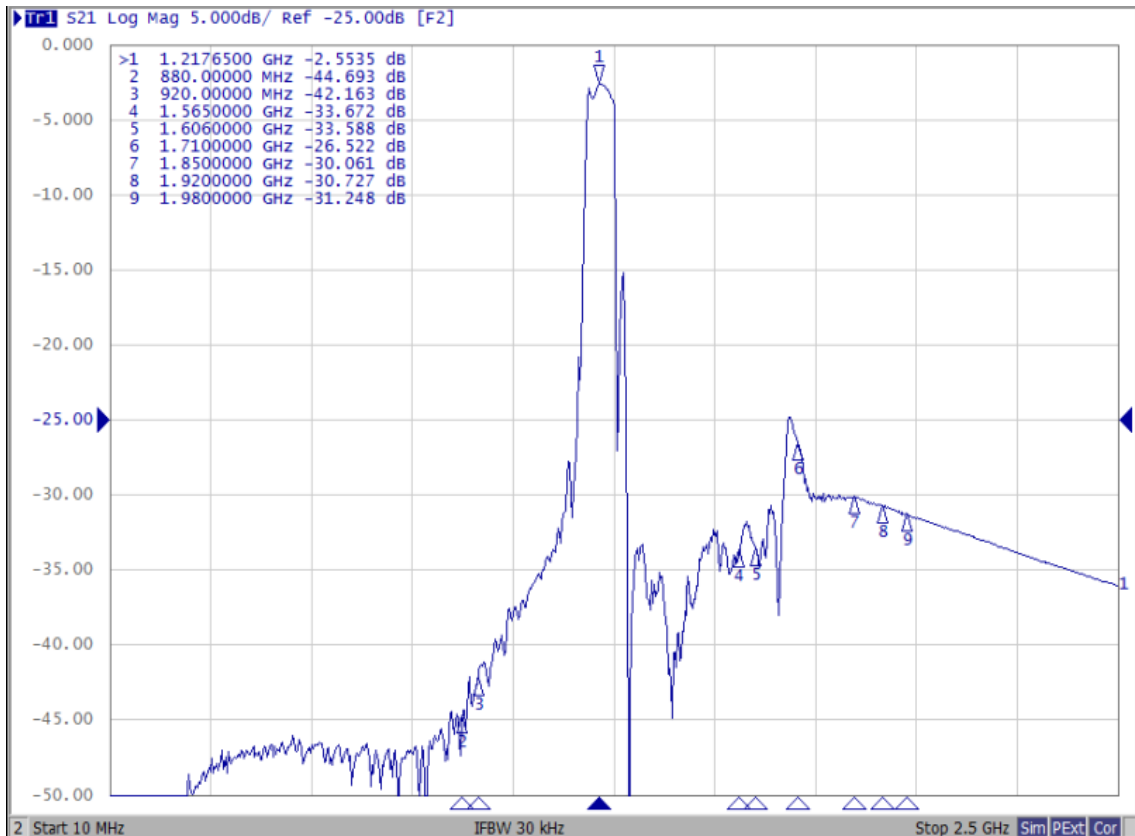
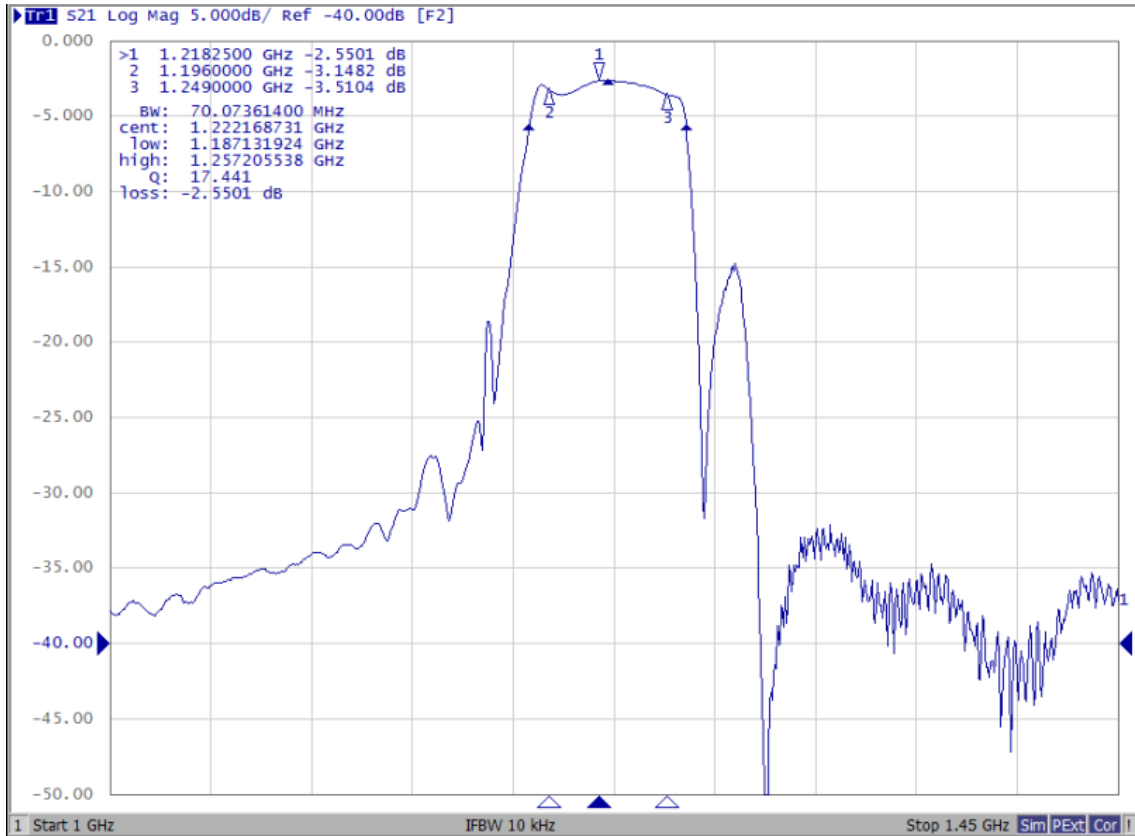


Pin #	Function
(1)	Antenna
(2)	Ground
(3)	Ground
(4)	Ground
(5)	Ground
(6)	L1 Band
(7)	Ground
(8)	Ground
(9)	L2 Band
(10)	Ground

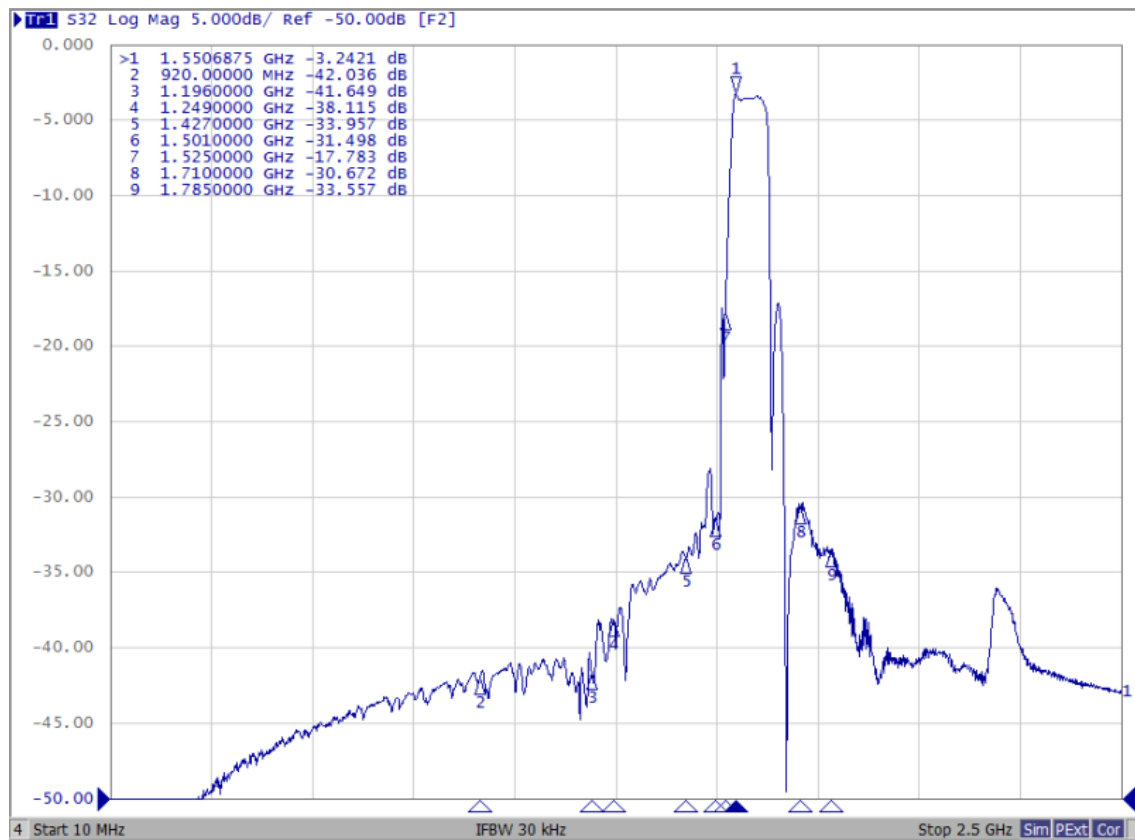
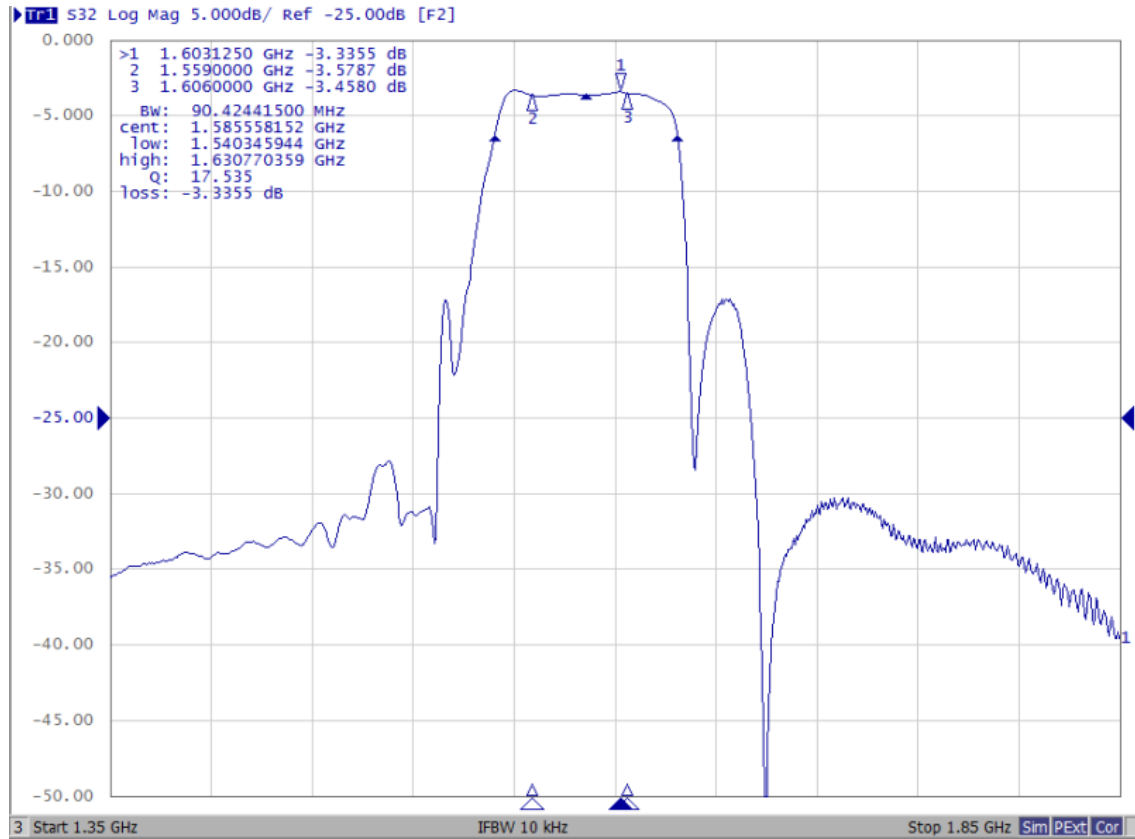


Year/Month	1	2	3	4	5	6	7	8	9	10	11	12
2017	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>	<u>J</u>	<u>K</u>	<u>L</u>	<u>M</u>
2018	<u>N</u>	<u>P</u>	<u>Q</u>	<u>R</u>	<u>S</u>	<u>T</u>	<u>U</u>	<u>V</u>	<u>W</u>	<u>X</u>	<u>Y</u>	<u>Z</u>
2019	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>	<u>l</u>	<u>m</u>
2020	<u>n</u>	<u>p</u>	<u>q</u>	<u>r</u>	<u>s</u>	<u>t</u>	<u>u</u>	<u>v</u>	<u>w</u>	<u>x</u>	<u>y</u>	<u>z</u>
2021	A	B	C	D	E	F	G	H	J	K	L	M
2022	N	P	Q	R	S	T	U	V	W	X	Y	Z
2023	a	b	c	d	e	f	g	h	j	k	l	m
2024	n	p	q	r	s	t	u	v	w	x	y	z

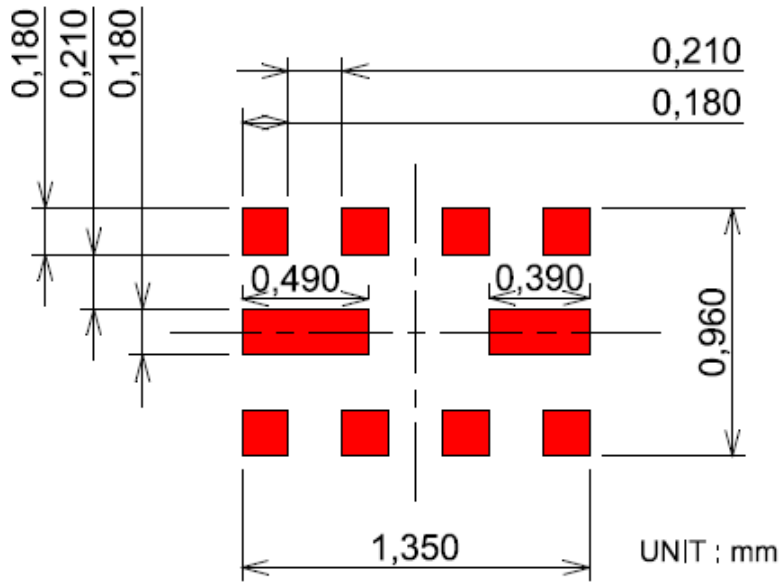
Frequency Characteristics: L2



L1



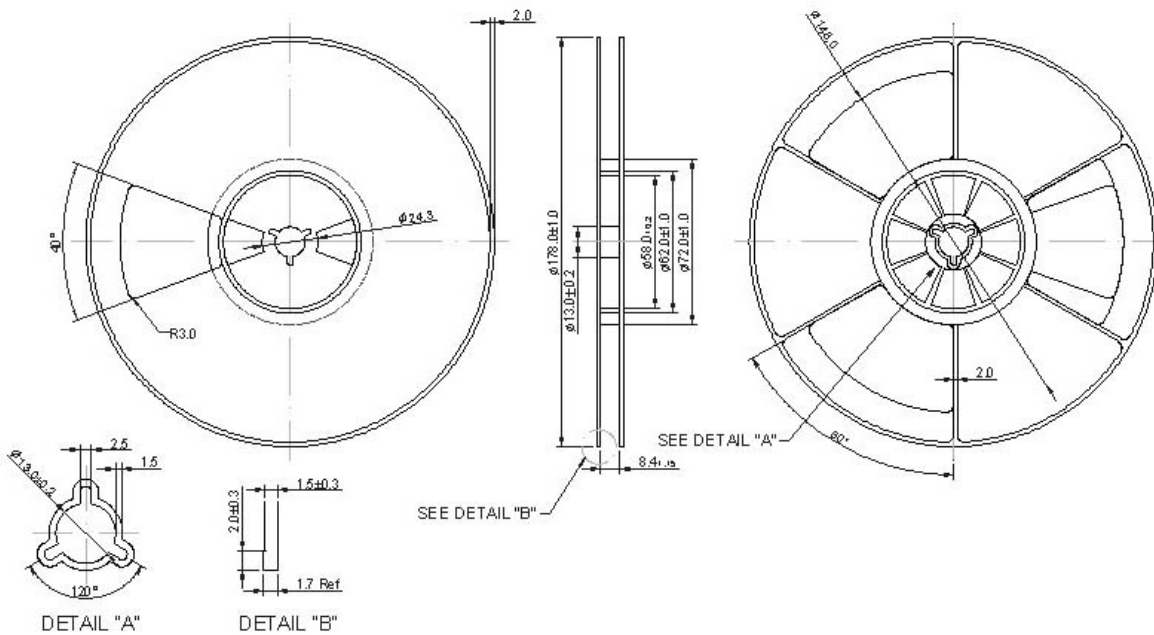
PCB FOOTPRINT:



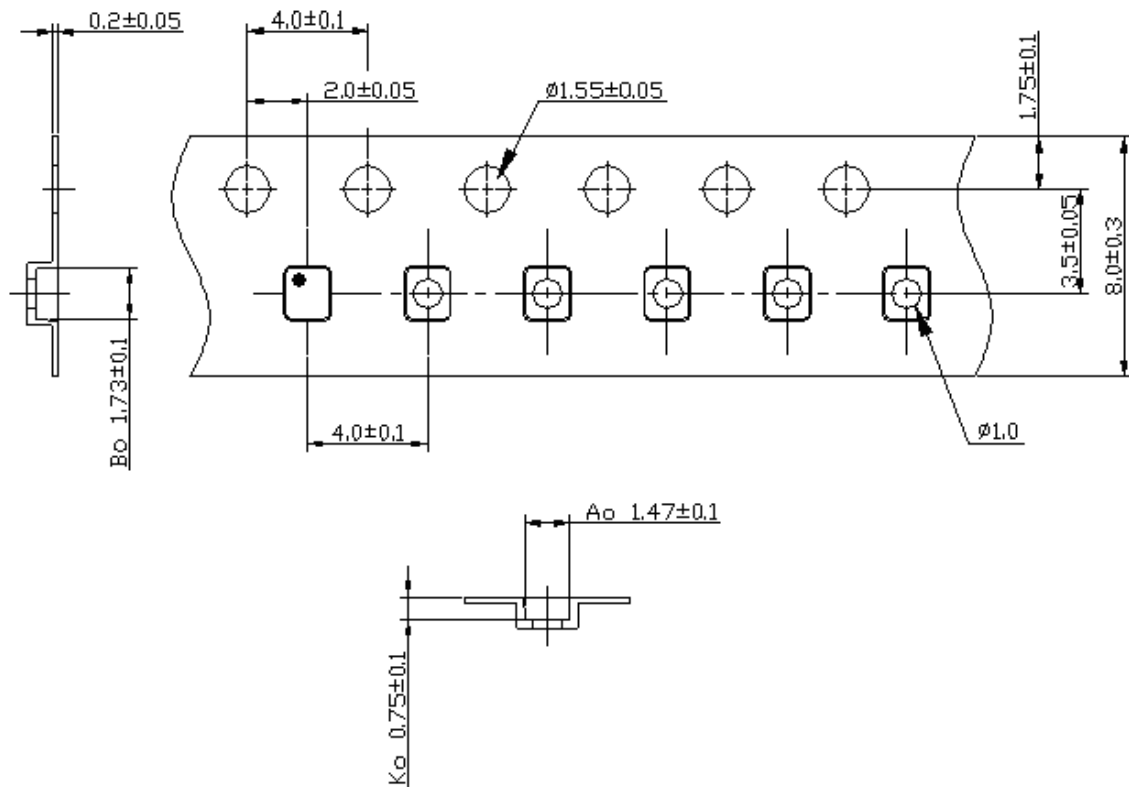
PACKING:

1. REEL DIMENSION

Reel Count: 7" = 2000



2. 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.

