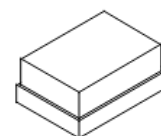


SF2657K

**2593 MHz
SAW Filter**



SM1411-5

MAXIMUM RATING:

- Maximum Input Power: 33 dBm, 5000h 50 °C
- Maximum DC Voltage: 0 V
- Operating temperature range 1: -40 °C to +85 °C
- Storage temperature range: -40 °C to +125 °C
- Moisture Sensitivity Level: Level 3(**MSL3**)

ELECTRICAL CHARACTERISTICS:

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

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

Item	Unit	Min.	Typ.	Max.
Center Frequency Fc	MHz	-	2593	-
Insertion Loss (2496 ~ 2500 MHz)	IL	-	2.1	2.7
Insertion Loss (2500 ~ 2535 MHz)	IL	-	1.9	2.6
Insertion Loss (2535 ~ 2675 MHz)	IL	-	1.2	1.8
Insertion Loss (2675 ~ 2690 MHz)	IL	-	1.5	1.8
Amplitude Ripple (2496 ~ 2690 MHz)	dB _{p-p}	-	-	1.7
VSWR S11 (2496 ~ 2690 MHz)	-	-	1.6	1.8
VSWR S22 (2496 ~ 2690 MHz)	-	-	1.6	1.8
Attenuation (reference level from 0 dB)				
300 ~ 925 MHz	dB	33	35	-
1565 ~ 1980 MHz	dB	30	31	-
2110 ~ 2170 MHz	dB	30	32	-

2300 ~ 2400 MHz	dB	32	35	-
2402 ~ 2422 MHz	dB	32	34	-
2407 ~ 2427 MHz	dB	32	34	-
2412 ~ 2432 MHz	dB	32	33	-
2417 ~ 2447 MHz	dB	30	33	-
2432 ~ 2452 MHz	dB	30	33	-
2442 ~ 2462 MHz	dB	30	35	-
2447 ~ 2467 MHz	dB	8	30	-
2452 ~ 2472 MHz	dB	4	20	-
2457 ~ 2477 MHz	dB	2	10	-
2462 ~ 2482 MHz	dB	1.5	5	-
3300 ~ 3800 MHz	dB	30	35	-
3800 ~ 4200 MHz	dB	40	52	-
4400 ~ 5000 MHz	dB	42	54	-
4992 ~ 5380 MHz	dB	45	58	-
5150 ~ 5850 MHz	dB	45	57	-
7488 ~ 8070 MHz	dB	30	39	-

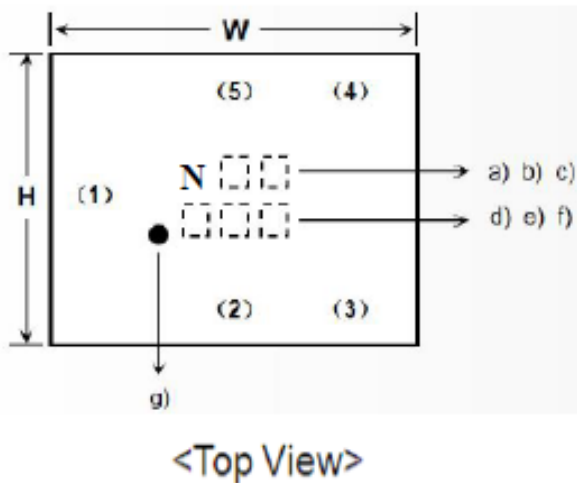


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

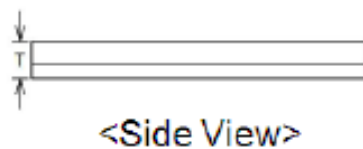
NOTES:

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

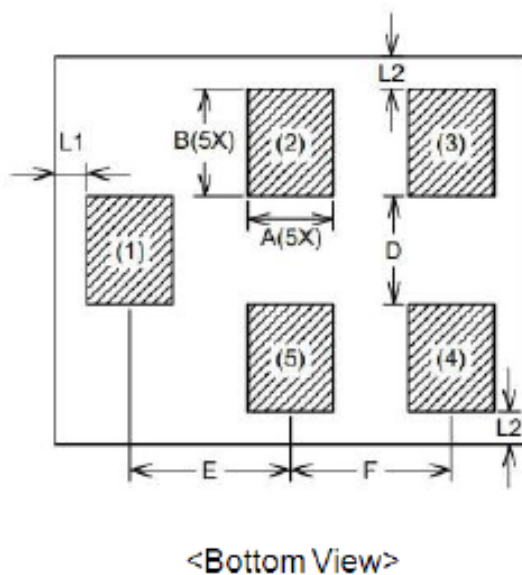
OUTLINE DRAWING:



Symbol	DIMENSION REQUIREMENT	
W	1.4±0.05	Top View
H	1.1±0.05	
T	0.6 Max	Side View
A	0.25±0.03	Bottom View
B	0.325±0.03	
D	0.25±0.03	
E	0.5±0.03	
F	0.5±0.03	
L1	0.075	
L2	0.1	



Pin No.	Function
1	Input
2	Ground
3	Ground
4	Output
5	Ground



Symbol	Description
a	Means the frequency band. The band "N41" corresponding character is "N".
b	Coding of the product information.
c	Meaning of the production types.
d	Coding of the year and month number.
e	Coding of the week number.
f	Coding of the serial number of the lot in each week.
g	Marking for pad number 1.

	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2020/2024	A	B	C	<u>D</u>	E	F	G	H	J	K	L	M
2021/2025	N	P	Q	R	S	T	U	V	W	X	Y	Z
2022/2026	<u>a</u>	b	<u>c</u>	d	e	<u>f</u>	h	<u>i</u>	j	<u>k</u>	<u>2</u>	<u>m</u>
2023/2027	<u>n</u>	3	q	r	4	t	<u>u</u>	5	6	7	y	9

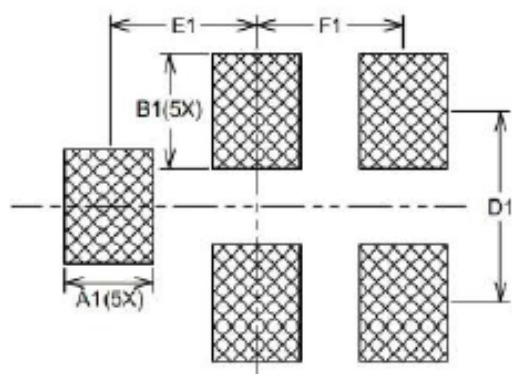
e) Week sequence of the lot ID

W1	W2	W3	W4	W5	W6
A	B	C	D	E	F

f) Week Code Table & Lot Code Table.

001	002	003	004	005	006	007	008	009	010	011	012
A	B	C	<u>D</u>	E	F	G	H	J	K	L	M
013	014	015	016	017	018	019	020	021	022	023	024
N	P	Q	R	S	T	U	V	W	X	Y	Z
025	026	027	028	029	030	031	032	033	034	035	036
<u>a</u>	b	<u>c</u>	d	e	<u>f</u>	h	<u>i</u>	j	<u>k</u>	<u>2</u>	<u>m</u>
037	038	039	040	041	042	043	044	045	046	047	048
<u>n</u>	3	q	r	4	t	<u>u</u>	5	6	7	y	9

F. PCB Footprint:

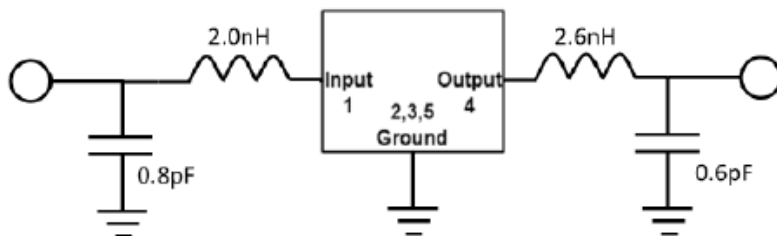


Symbol	DIMENSION REQUIREMENT	
A1	0.3±0.03	Land pattern THRU VIEW
B1	0.375±0.03	
D1	0.575±0.03	
E1	0.5±0.03	
F1	0.5±0.03	

Notes:

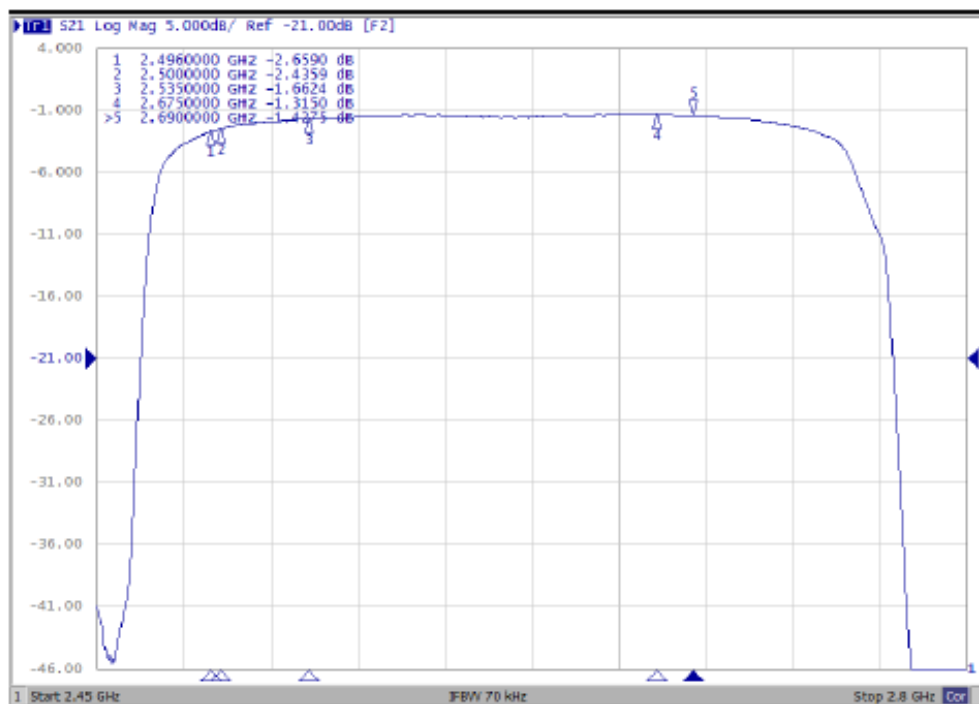
- 1.Dimension: mm
- 2.Dimensions nominal unless otherwise noted
- 3.Pad(1) to (5) are same size

Measurement Circuit:



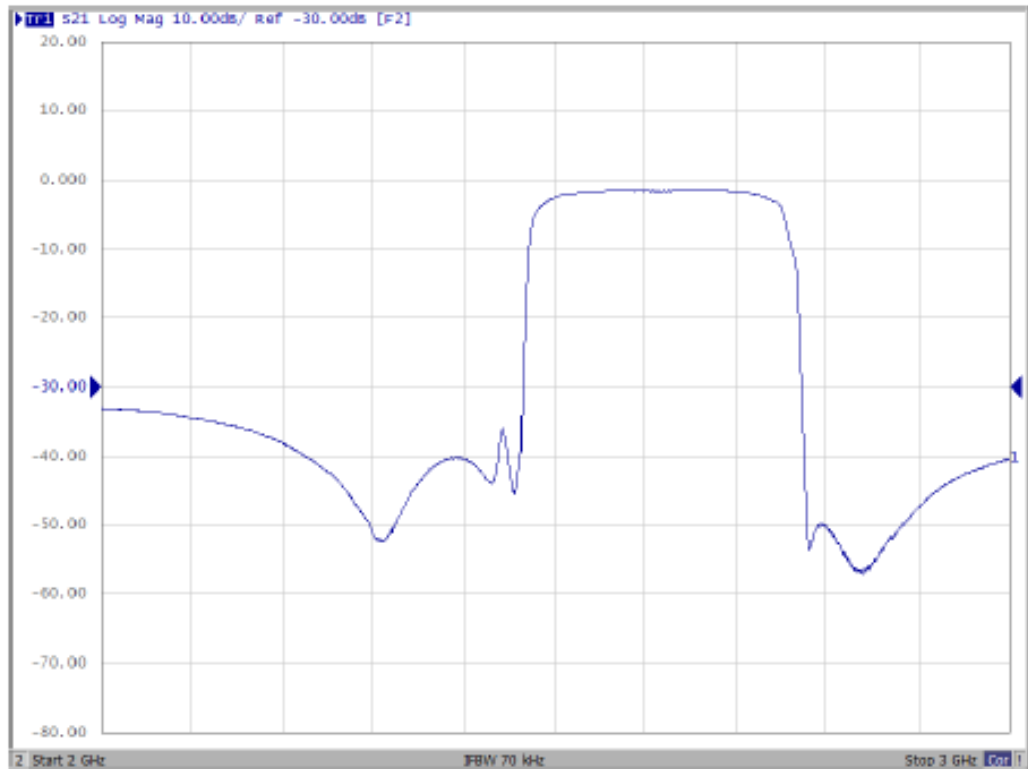
Schematic of test matching circuit

Span 350 MHz

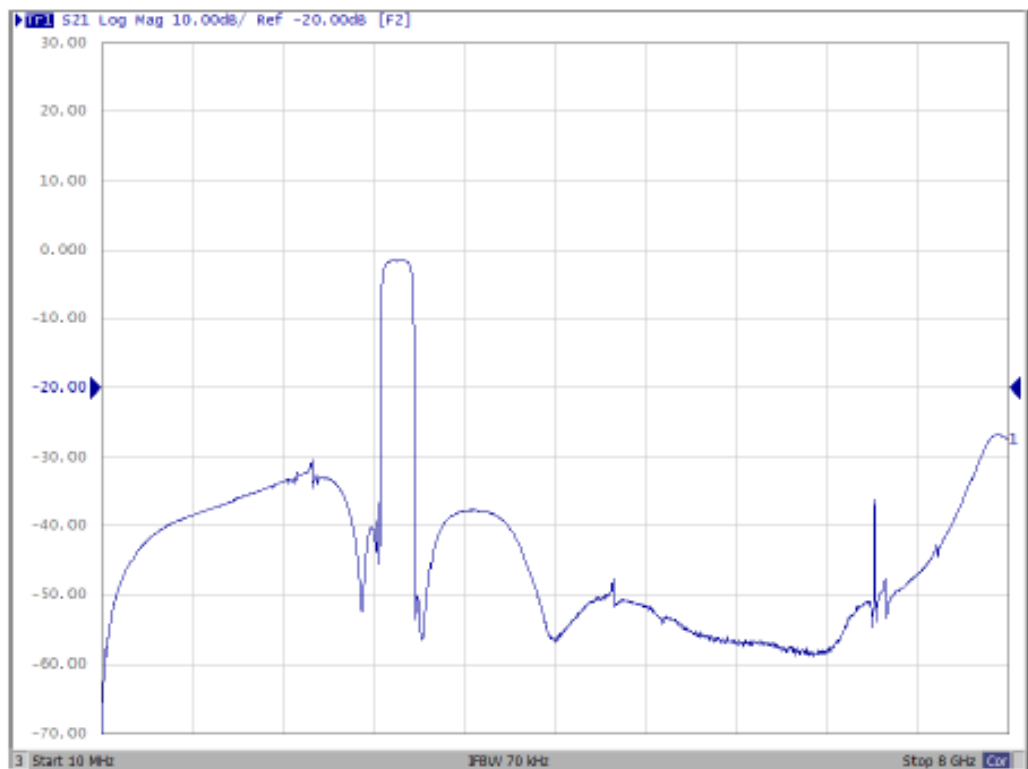


Frequency Characteristics:

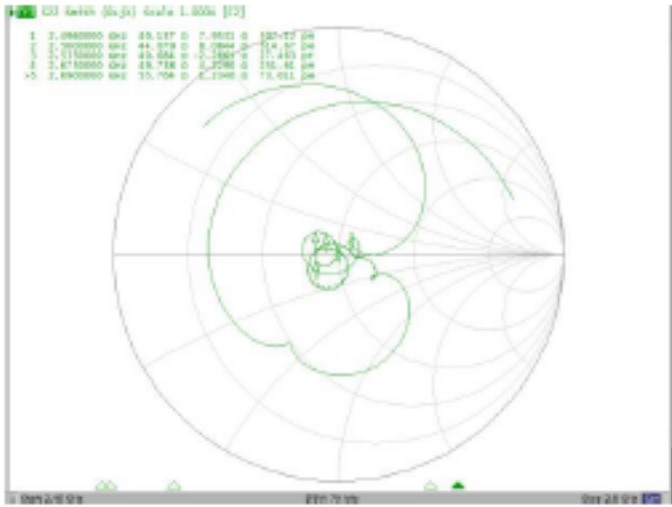
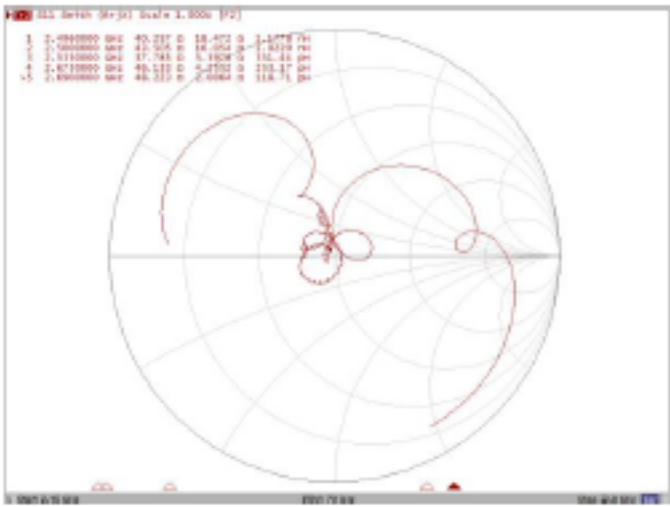
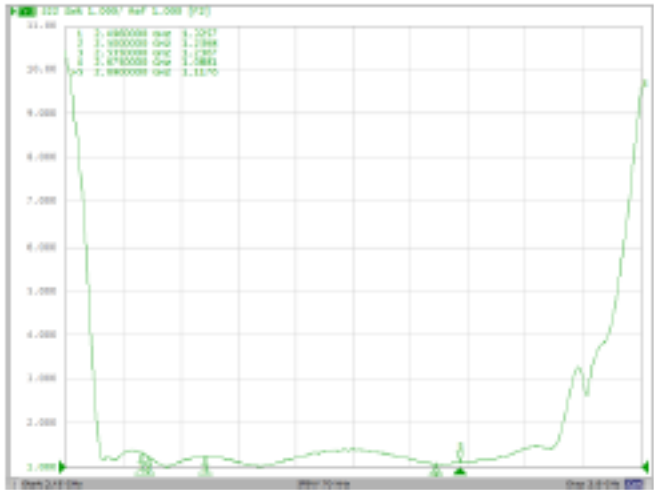
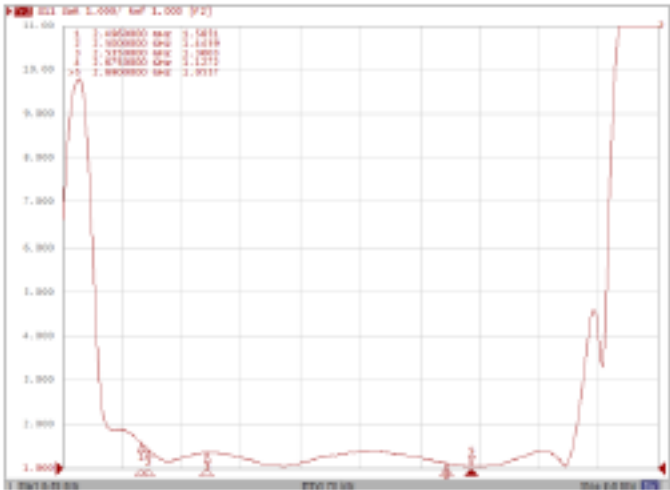
Span 1000 MHz



Span 8000 MHz

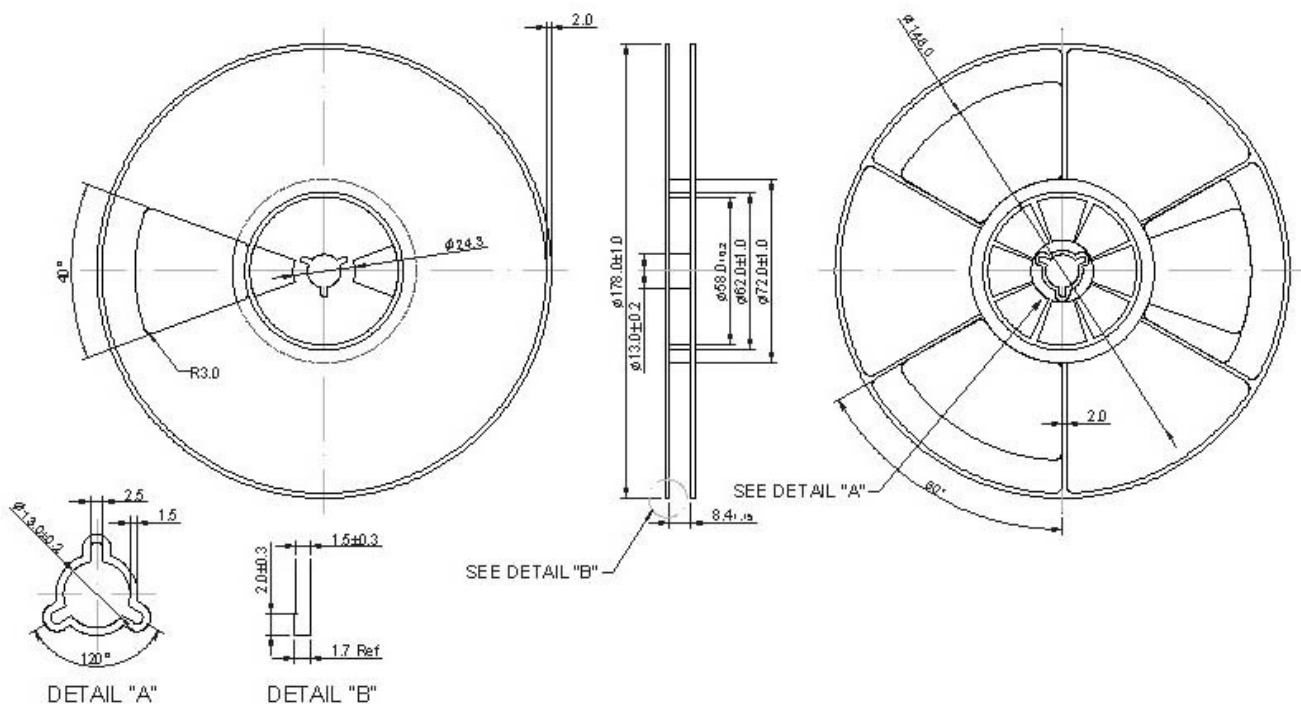


Reflection Functions:

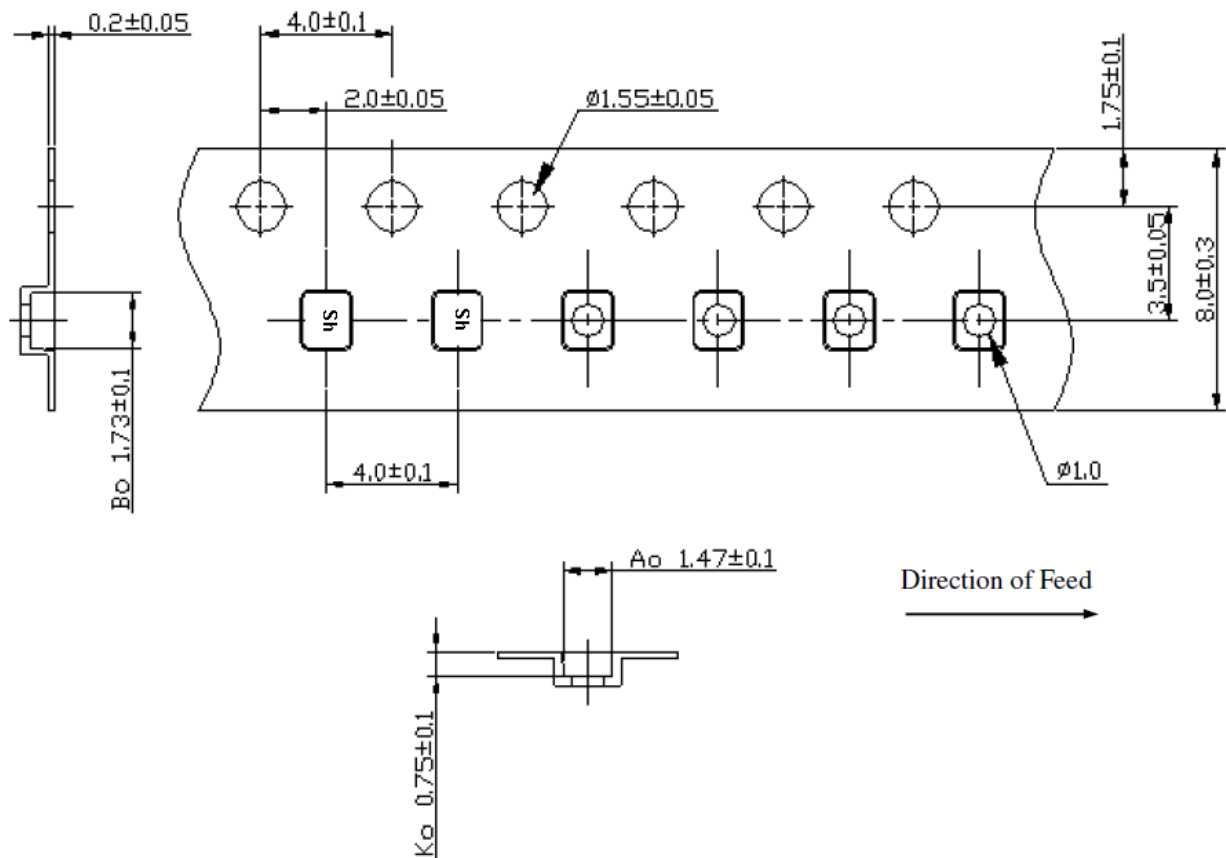


PACKING:

- 1. REEL DIMENSION
(Reel Count: 7" = 3000)



- 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 245~260°C peak (min. 10sec).
4. Time: 2 times.

