

SAW Filter 782 MHz

MODEL NO.: TA1813B

REV. No.: 2.0

A. MAXIMUM RATING:

1. Maximum Input Power: 15 dBm
2. DC voltage: 3 V
3. Operating Temperature: -40 °C to +85 °C
4. Storage Temperature: -40 °C to +85 °C
5. Moisture Sensitivity Level: Level 1 (MSL 1)
6. ESD: 100 V(MM), 200 V(HBM)



Electrostatic Sensitive Device (ESD)

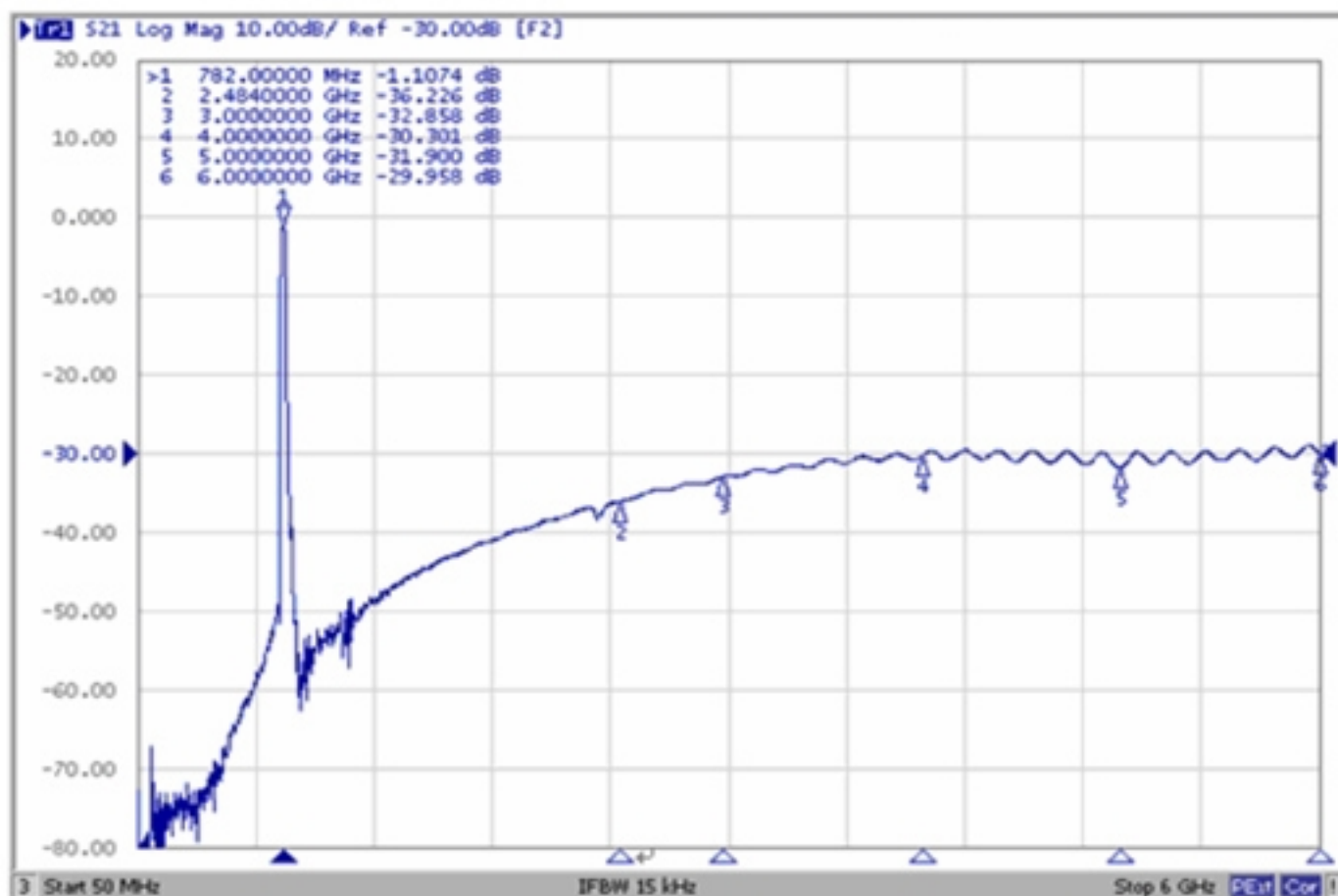
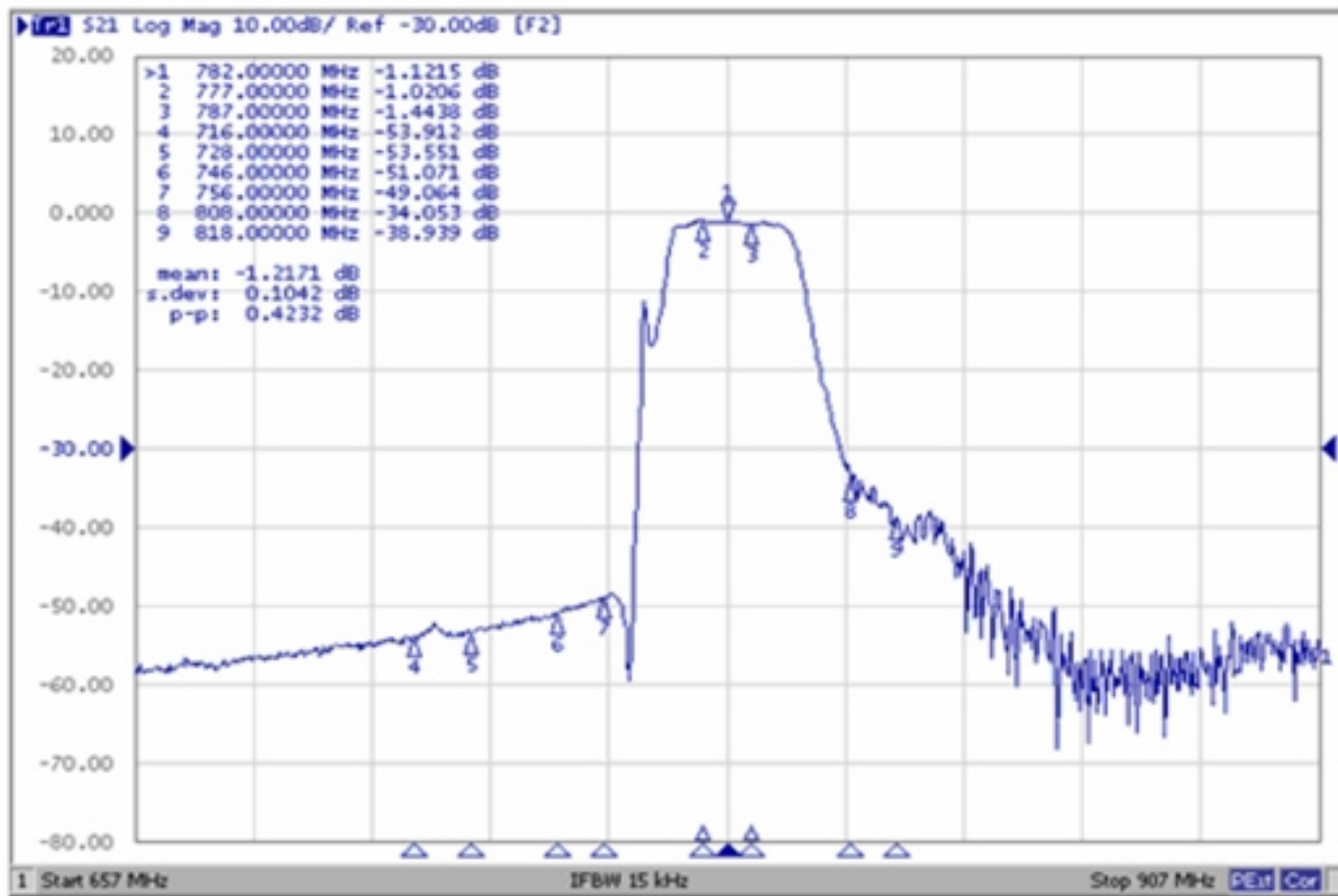
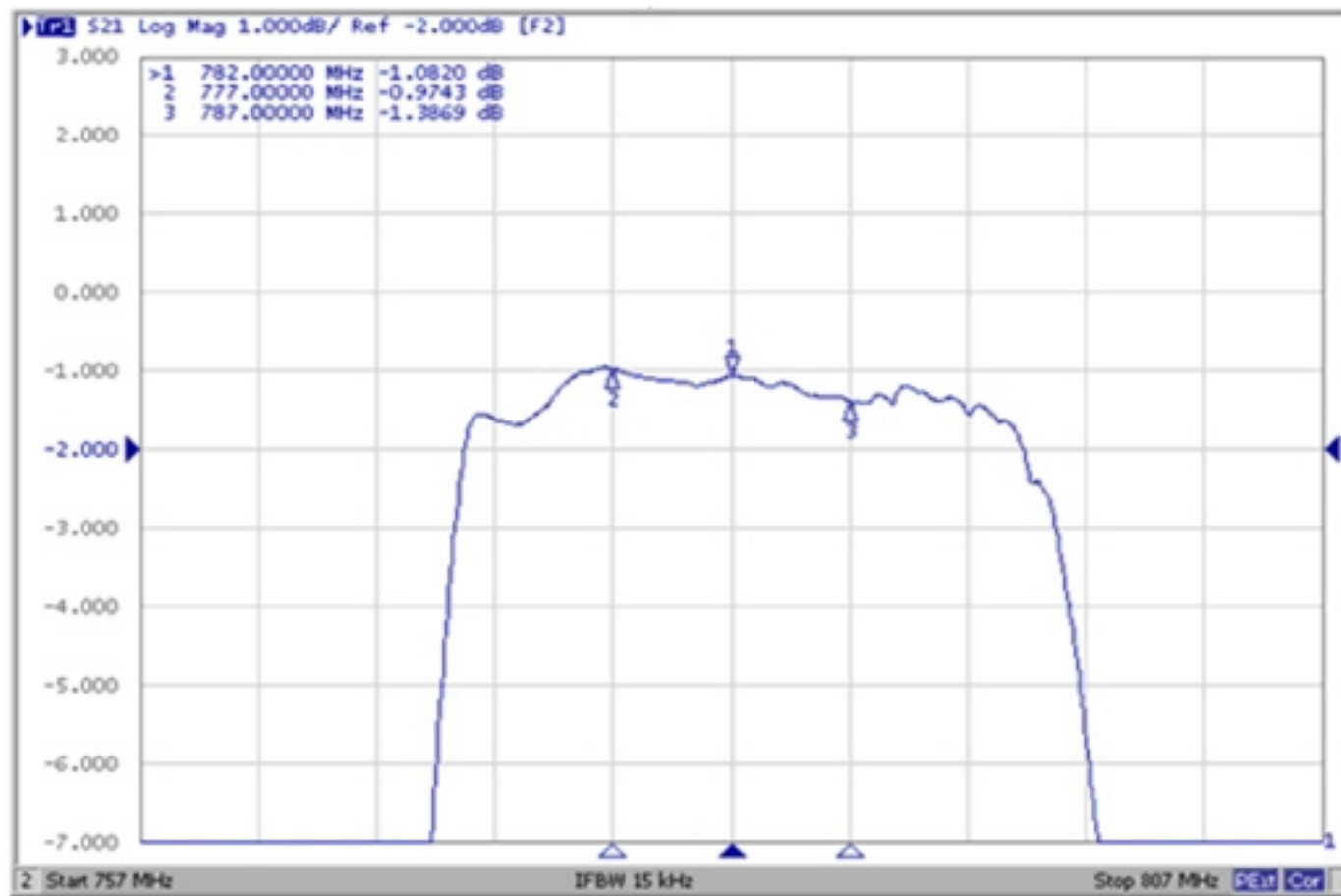
B. ELECTRICAL CHARACTERISTICS:

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

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

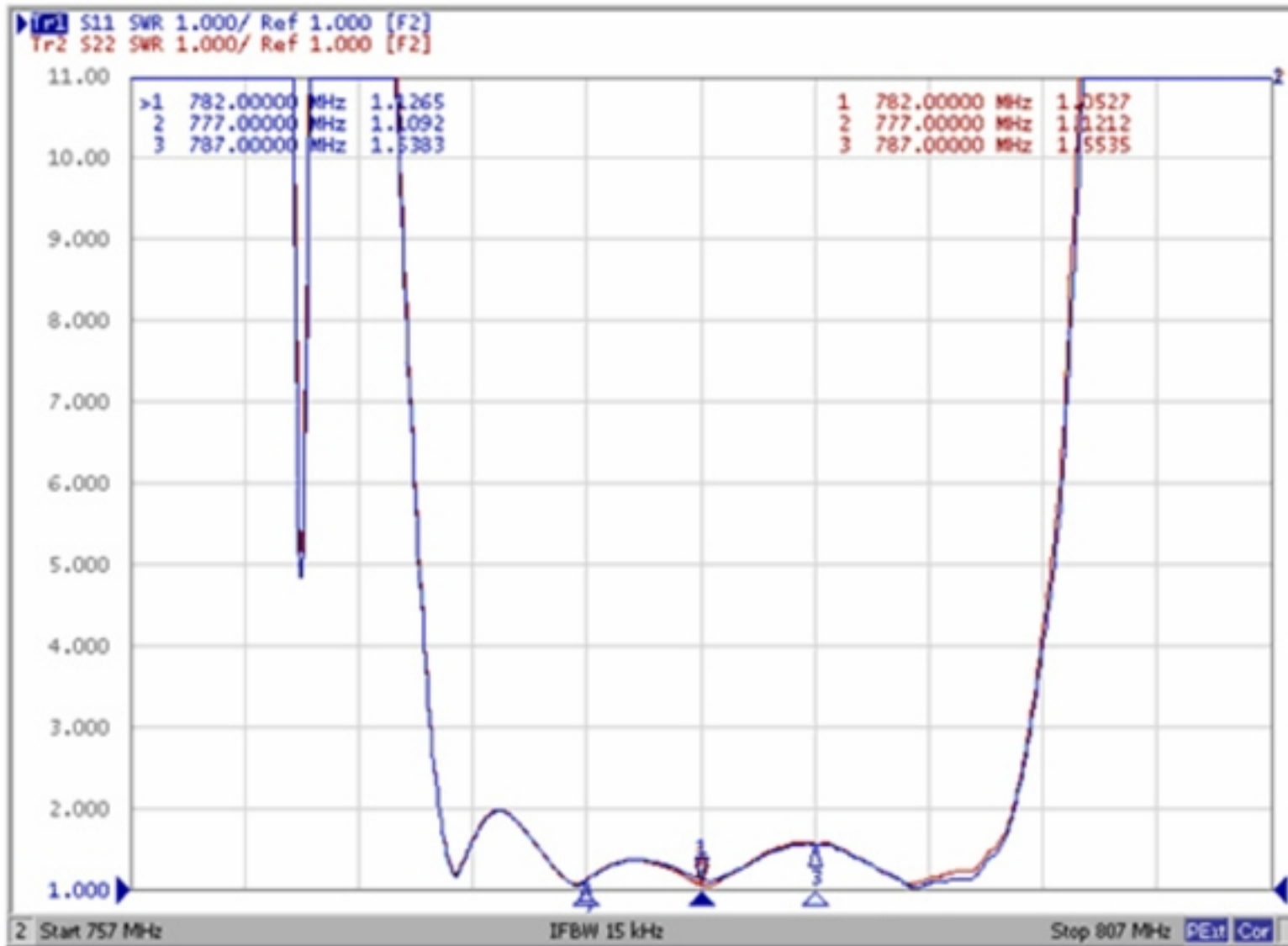
Parameters Description	Unit	Min.	Typ.	Max.
Center Frequency F_c	MHz	-	782	-
Insertion Loss (777~787 MHz) IL	dB	-	1.5	2.3
Amplitude Ripple (777~787 MHz)	dB _{p-p}	-	0.5	1.1
VSWR (777~787 MHz)	-	-	1.7	2.1
Attenuation (Reference level from 0 dB)				
DC ~ 716 MHz	dB	45	59	-
716 ~ 728 MHz	dB	45	57	-
728 ~ 746 MHz	dB	45	57	-
746 ~ 756 MHz	dB	44	56	-
808 ~ 818 MHz	dB	23	31	-
869 ~ 894 MHz	dB	40	55	-
1554 ~ 1565 MHz	dB	35	48	-
1565 ~ 1585 MHz	dB	35	48	-
1597 ~ 1607 MHz	dB	35	47	-
1805 ~ 1880 MHz	dB	30	45	-
1930 ~ 1990 MHz	dB	30	44	-
2110 ~ 2170 MHz	dB	30	43	-
2331 ~ 2361 MHz	dB	29	42	-
2400 ~ 2484 MHz	dB	27	42	-
2484 ~ 3000 MHz	dB	25	39	-
3000 ~ 4000 MHz	dB	21	39	-
4000 ~ 5000 MHz	dB	15	36	-
5000 ~ 6000 MHz	dB	15	36	-

C. FREQUENCY CHARACTERISTIC:

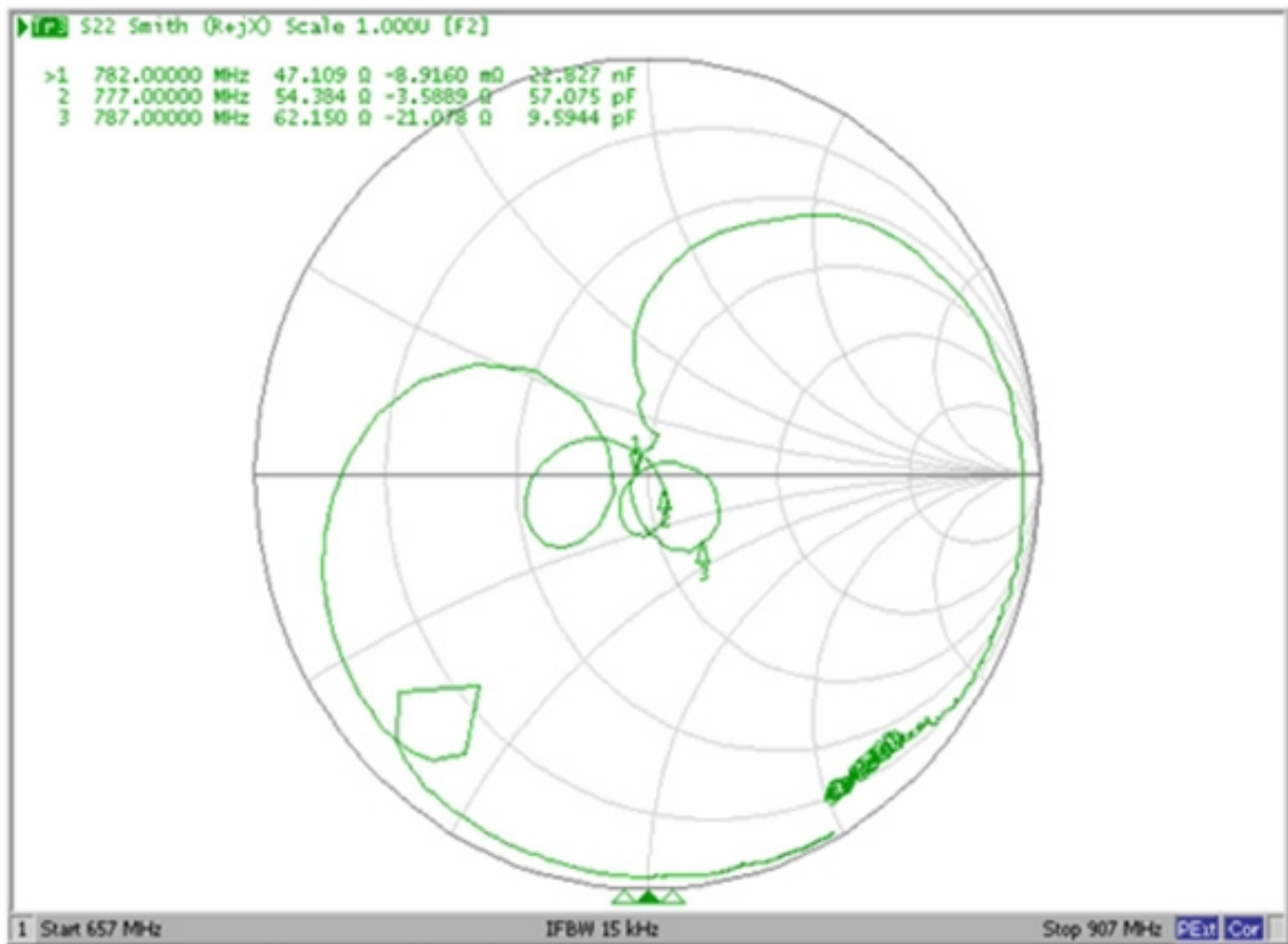
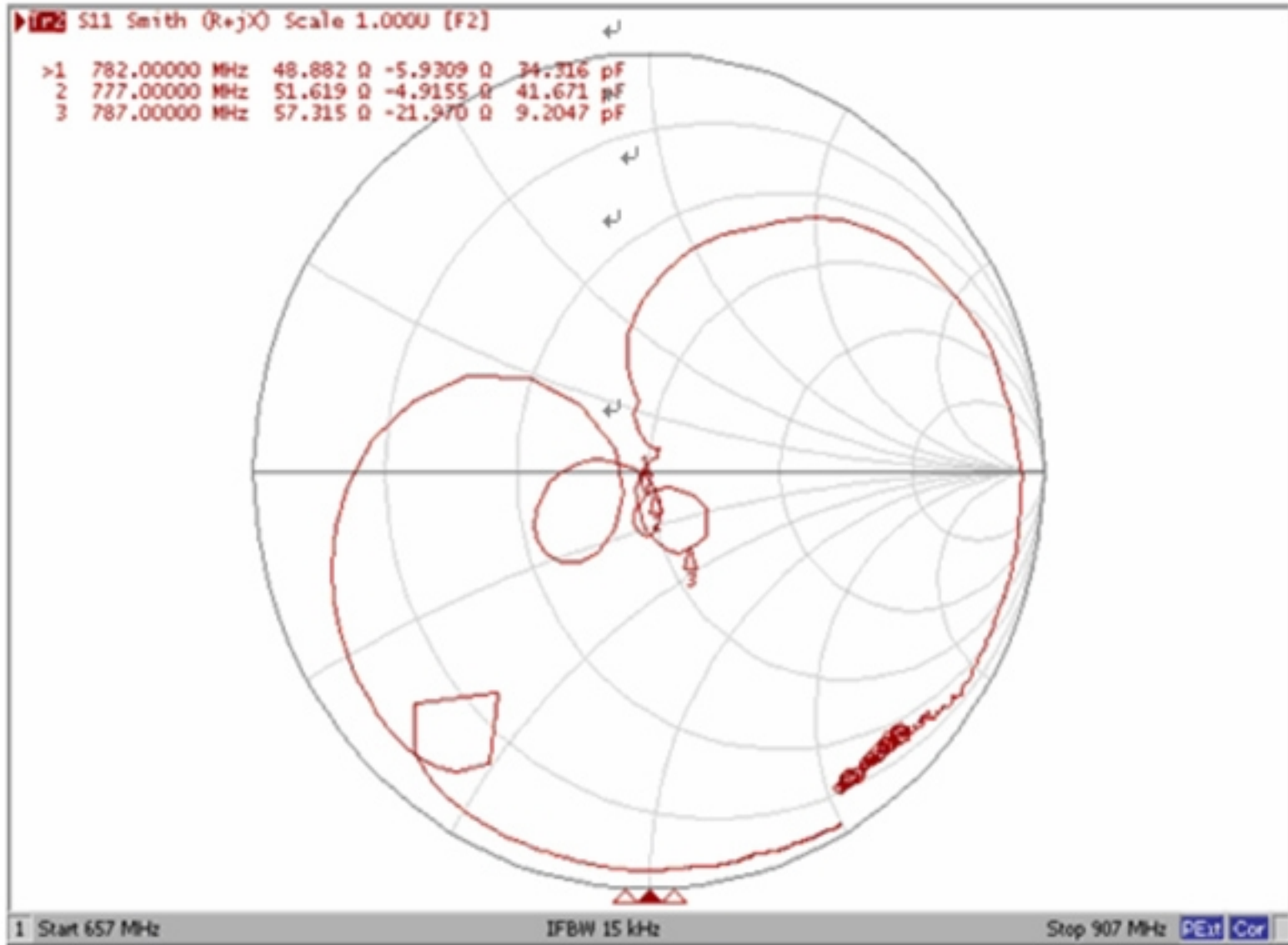


Reflection Functions:

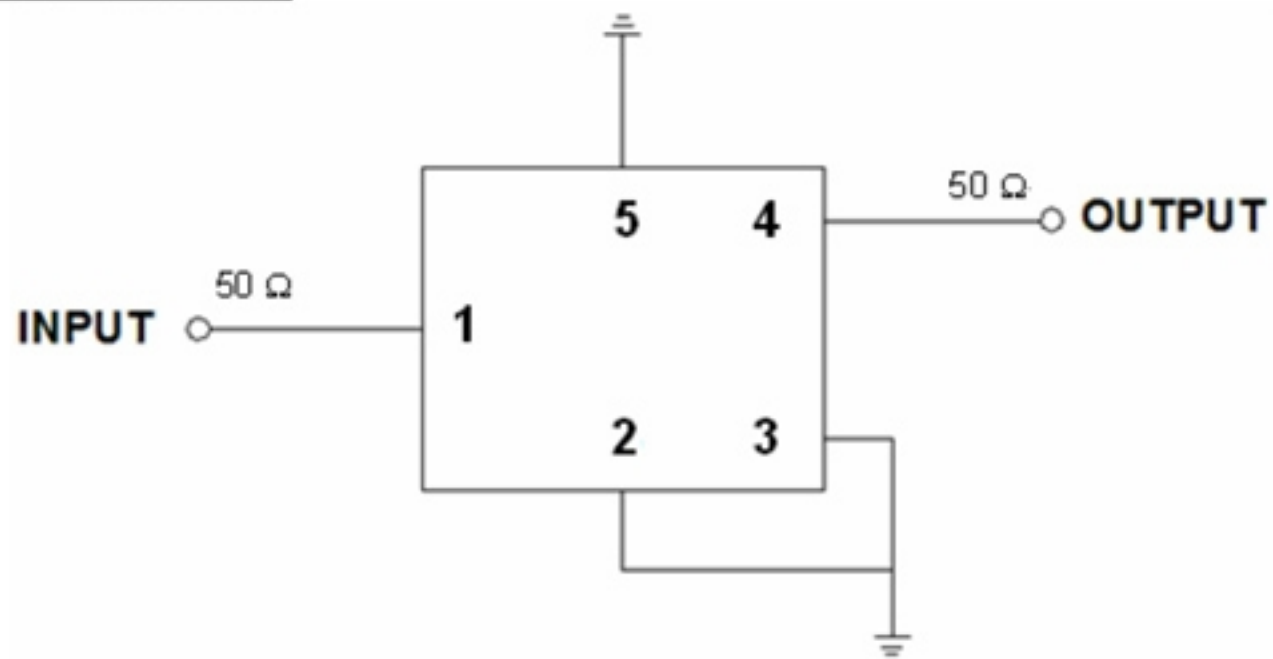
VSWR



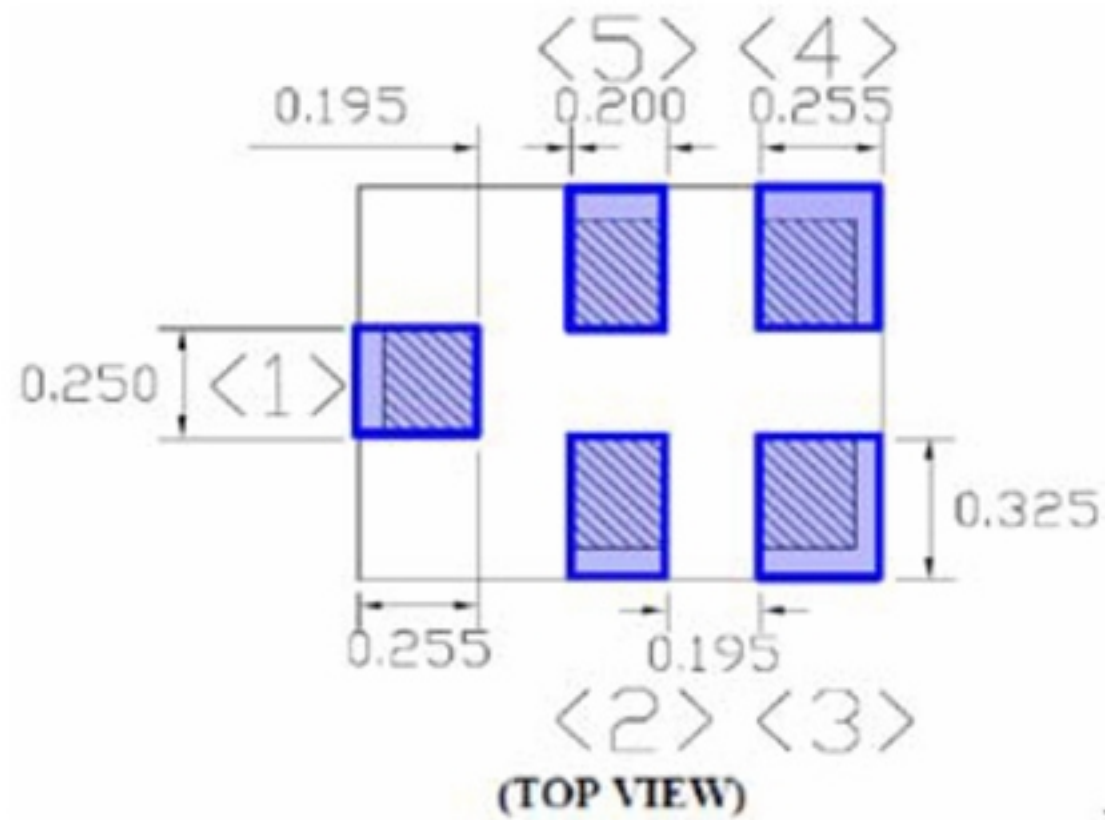
Smith Chart



D. MEASUREMENT CIRCUIT:

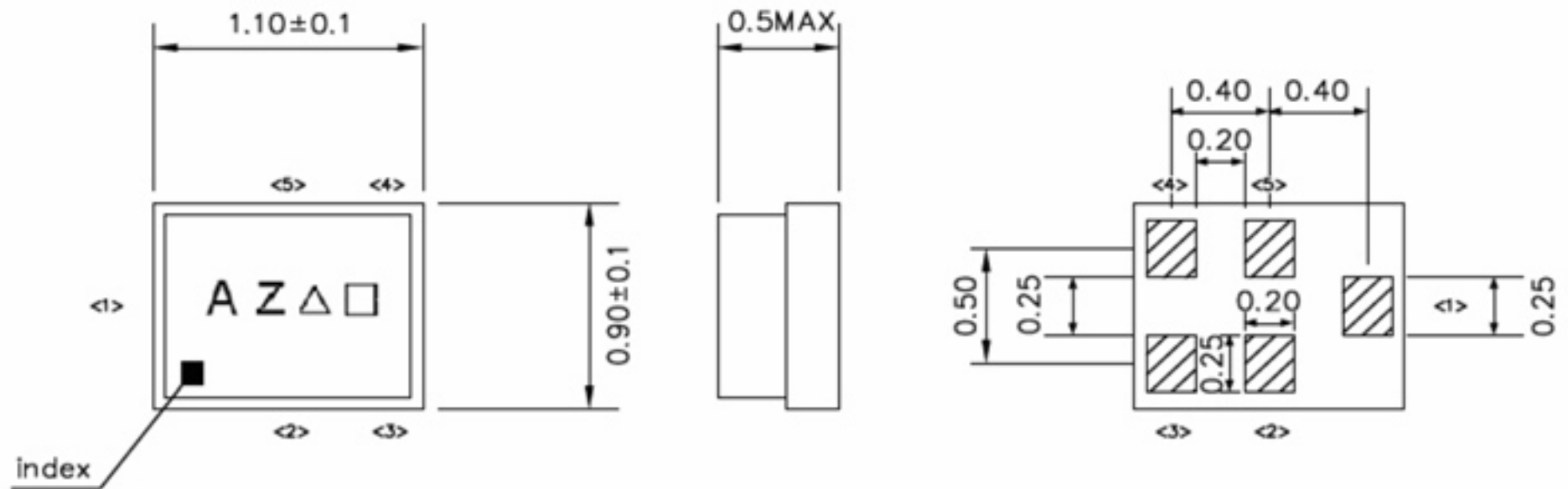


E. PCB Footprint:



F. OUTLINE DRAWING (Mass Production):

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

△ : Date Code

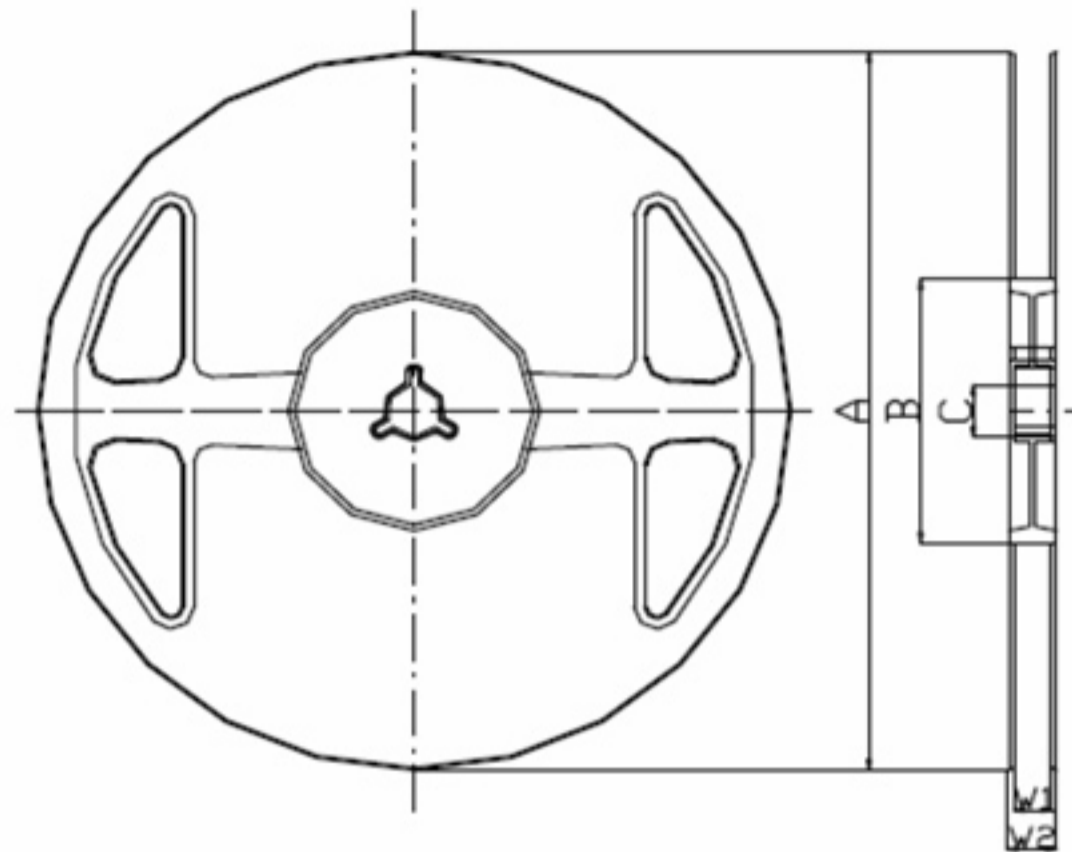
□ : Lot No. (Indicated by 0~9 or A to Z and a to z, except I, O, i, o and l)

Date Code:

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2017	A	B	C	Ⓞ	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019	a	b	c	d	e	f	g	h	j	k	l	m
2020	n	p	q	r	s	t	u	v	w	x	y	z

G. PACKING: (Ref: WI-75M03)

1. REEL DIMENSION



Materials of Reel

Material : Polystyrene + Carbon

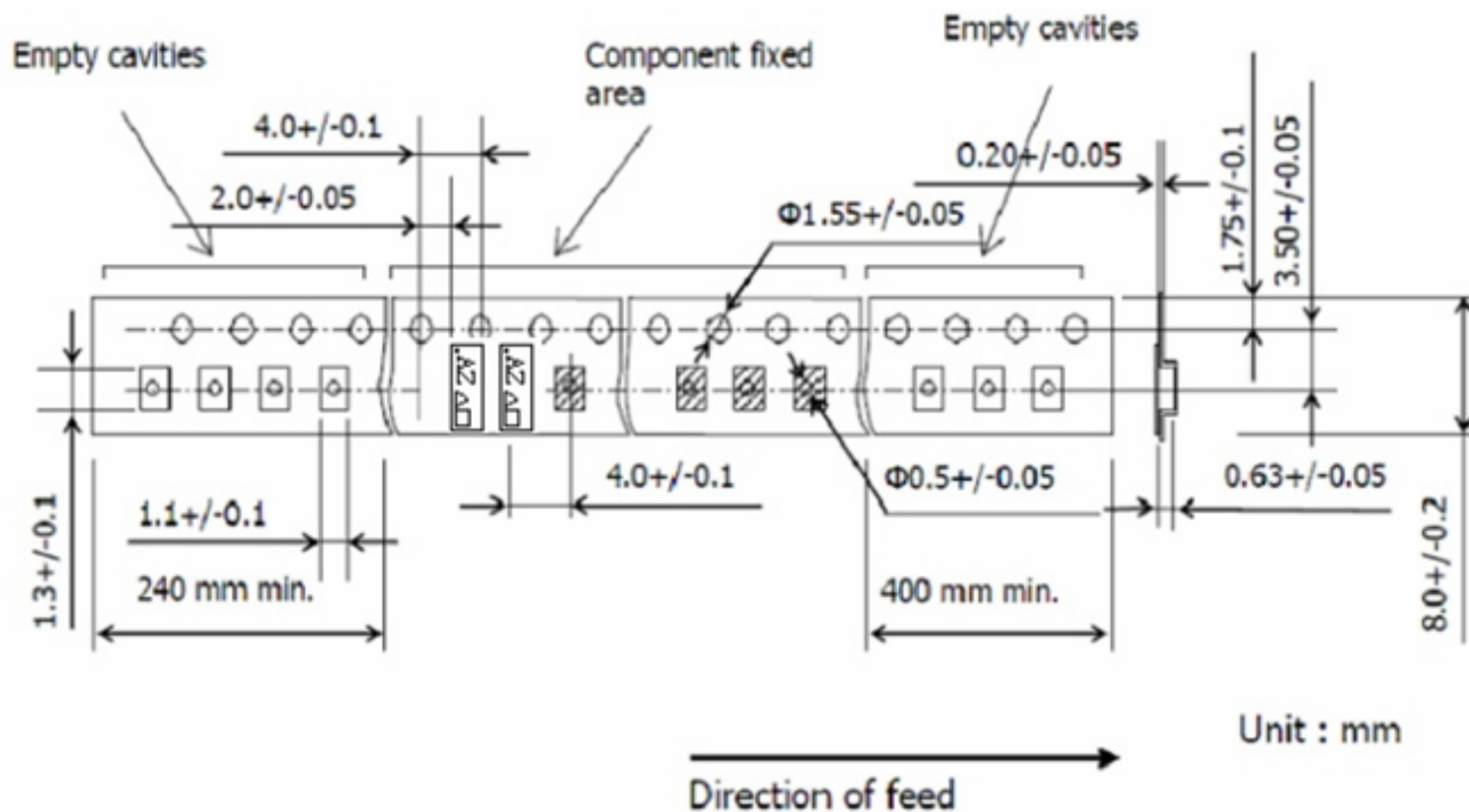
Color : Black

Surface resistance (reference value) : $10^9 \Omega/\text{sq}$ Max.

Unit : mm

Code	Quantity	A	B	C	W1	W2
J	5,000 pcs	$\phi 180.0 +0.0/-1.5$	$\phi 66.0 +/-0.5$	$\phi 13.0 +/-0.2$	$9.0 +1.0/-0.0$	$11.4 +/-1.0$

2. TAPE DIMENSION



H. 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.

