



# TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,  
Taoyuan, 324, Taiwan, R.O.C.

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## Product Specifications Approval Sheet

Product Description: SAW DPX 897.5/942.5MHz LTE Band 8 SMD 2016

TST Part No.: TF0094A

Customer Part No.: \_\_\_\_\_

Customer signature required
Company: _____
Division: _____
Approved by : _____
Date: _____

Checked by: \_\_\_\_\_ Hayley Chou *Hayley Chou*

Approved by: \_\_\_\_\_ Andy Yu *Andy Yu*

Date: \_\_\_\_\_ 2017/04/26

1. Customer signed back is required before TST can proceed with sample build and receive orders.
2. Orders received without customer signed back will be regarded as agreement on the specifications.
3. Any specifications changes must be approved upon by both parties and a new revision of specifications shall be released to reflect the changes



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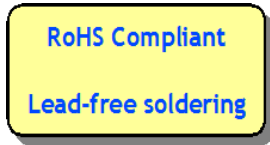
## SAW DPX 897.5/942.5MHz LTE Band 8 SMD 2016(35MHz BW)

MODEL NO.: TF0094A

REV. No.: 2.0

### A. MAXIMUM RATING:

1. Maximum Input Power: 29 dBm
2. Maximum DC Voltage Tx & Rx Port: +/-5V  
Maximum DC Voltage ANT Port: 0V
3. Operating Temperature: -20°C to +85°C
4. Storage Temperature: -40°C to +85°C
5. Moisture Sensitivity Level: Level 1
6. ESD 100V (MM) 200V (HBM)



Electrostatic Sensitive Device (ESD)

### B. ELECTRICAL CHARACTERISTICS:

Terminating impedance(Tx Port): 50 Ω (Single-ended)

Terminating impedance(Rx Port): 100 Ω (Balanced)

Terminating impedance(Ant Port): 50//7.5nH Ω (Single-ended)

#### Tx to ANT

Parameters Description		Unit	Mini.	Typical	Max.	
Insertion Loss		882.4~912.6 MHz	dB(*1)	-	1.8	2.6(*2)
Amplitude Ripple		882.4 ~ 912.6 MHz	dB	-	0.8	1.9
VSWR	ANT	880.4 ~ 914.6 MHz	-	-	1.9	2.2
	Tx		-	-	1.7	2.0
Input Power		880.4 ~ 914.6 MHz	-	+29dBm, Ta=+50°C 10kh, WCDMA modulation		
<b>Attenuation:</b>						
10.~821.0 MHz			dB	33	38	-
927.4~957.6 MHz			dB	44(*2)	53	-
1565.4~1605.9 MHz			dB	45	50	-
1760~1880 MHz			dB	40	49	-
1880~2500 MHz			dB	33	39	-
2620~2745 MHz			dB	30	36	-
3520~3660 MHz			dB	20	31	-
4400~4575 MHz			dB	15	24	-
5150~5850 MHz			dB	10	25	-

(\*1) Specification of insertion loss excludes loss that comes from the test board. (Approximately 0.05dB)

(\*2) Integrated over +/-1.92MHz around the WCDMA channel center frequency

## ANT to Rx

Parameters Description		Unit	Mini.	Typical	Max.	
Insertion Loss	927.4~957.6 MHz	dB(*1)	-	2.2	2.6(*2)	
	925.0~960.0 MHz		-	2.3	3.3	
Amplitude Ripple	925.0 ~ 960.0 MHz	dB	-	0.8	2.2	
Amplitude Balance	925.0 ~ 960.0 MHz	dB	-0.7	-0.3/+0.2	+0.7	
Phase Balance	925.0 ~ 960.0 MHz	deg	-7	-2/+3	+7	
VSWR	ANT	925.0 ~ 960.0 MHz	-	-	1.8	2.1
	Rx		-	-	2.0	2.3
<b>Attenuation:</b>						
10~880 MHz		dB	35	58	-	
882.4~912.6 MHz		dB	48(*2)	58	-	
1045~4810 MHz		dB	35	48	-	

## Tx to Rx

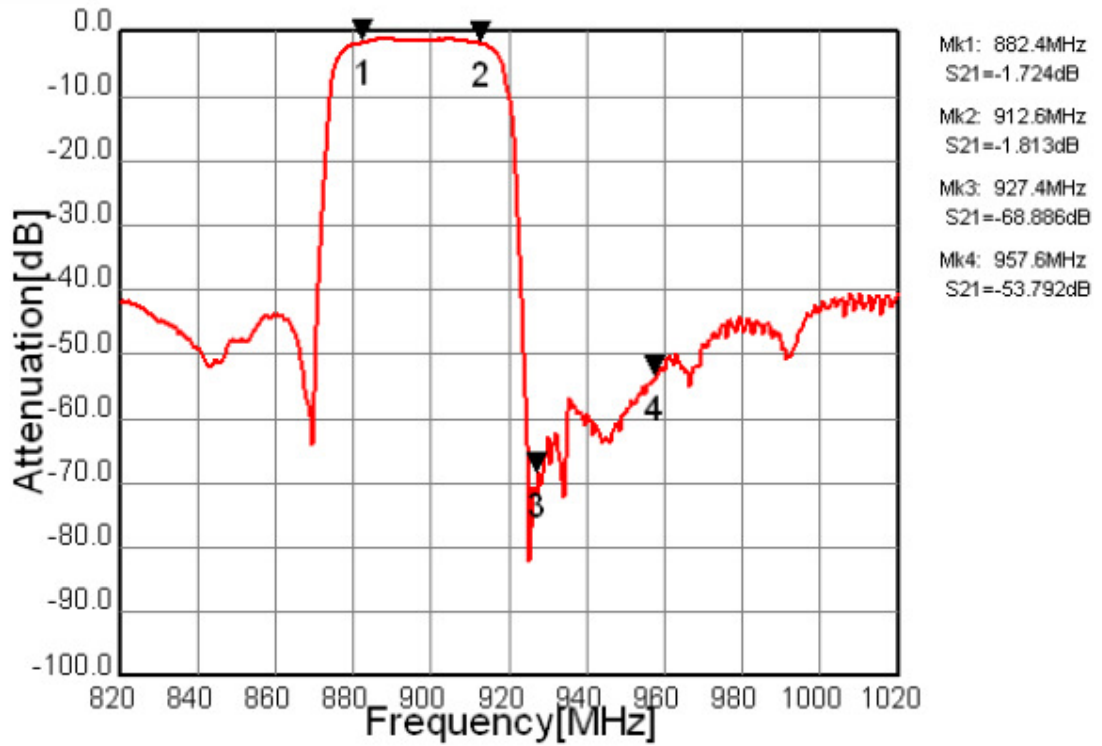
Isolation	882.4 ~ 912.6 MHz	dB	56(*2)	60	-
	927.4 ~ 957.6 MHz	dB	50(*2)	55	-

(\*1) Specification of insertion loss excludes loss that comes from the test board. (Approximately 0.05dB)

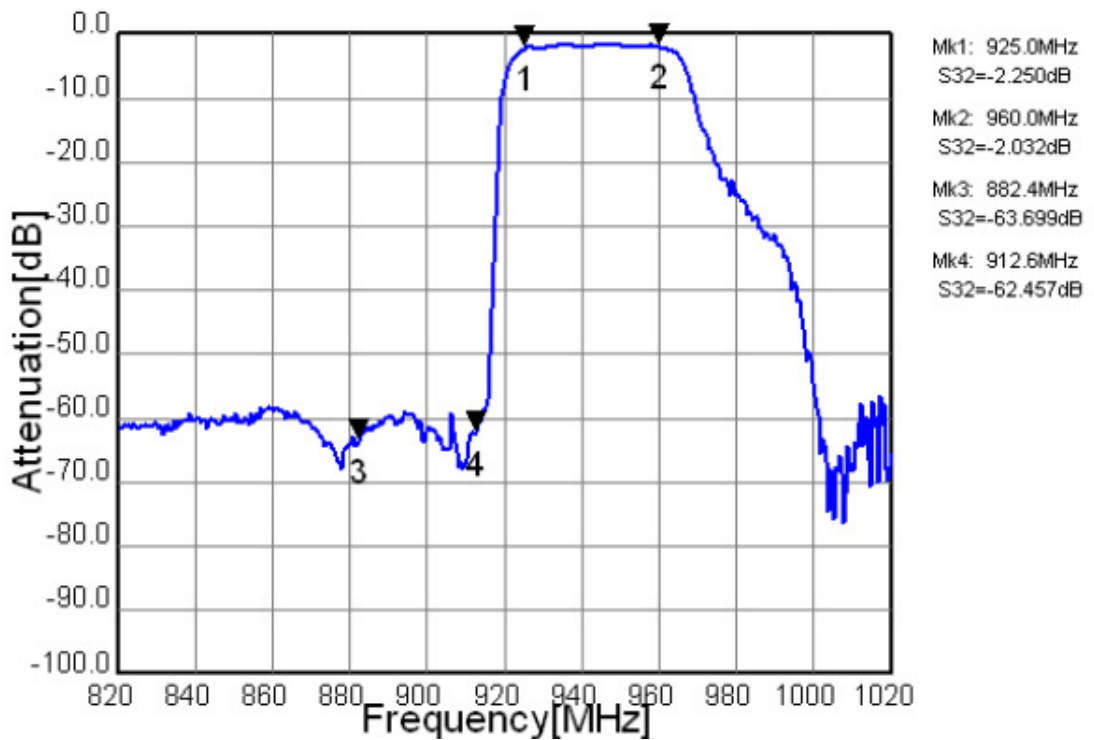
(\*2) Integrated over +/-1.92MHz around the WCDMA channel center frequency

### C. Frequency Characteristics:

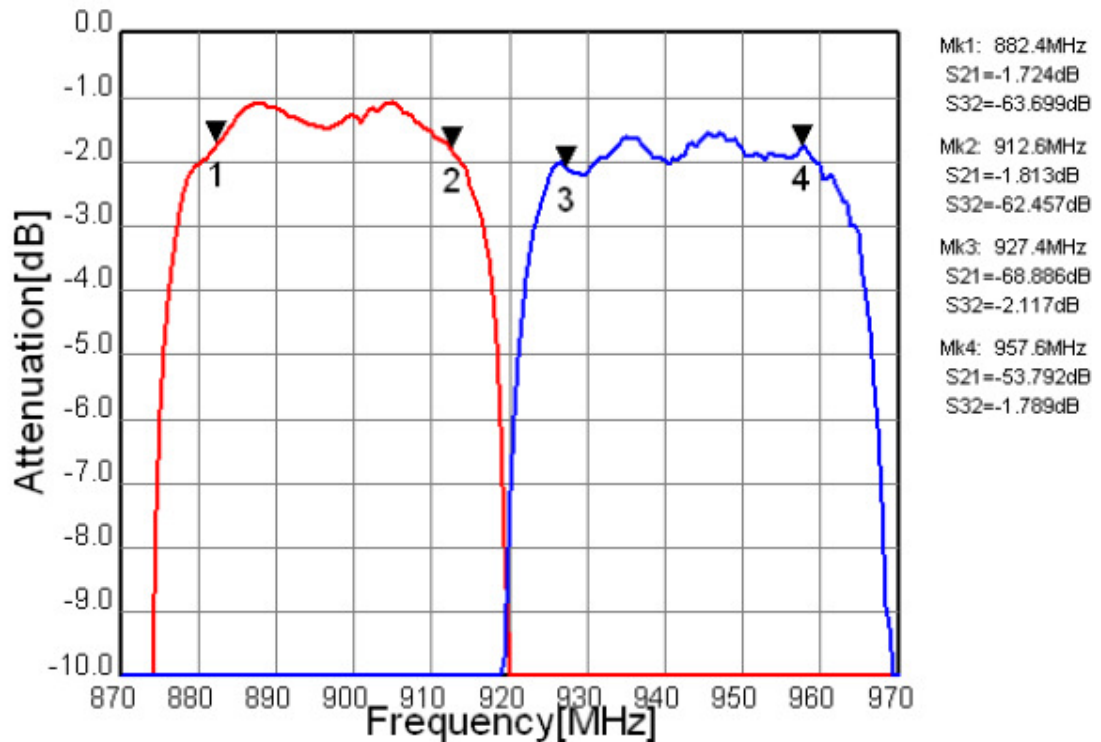
#### Tx to Ant



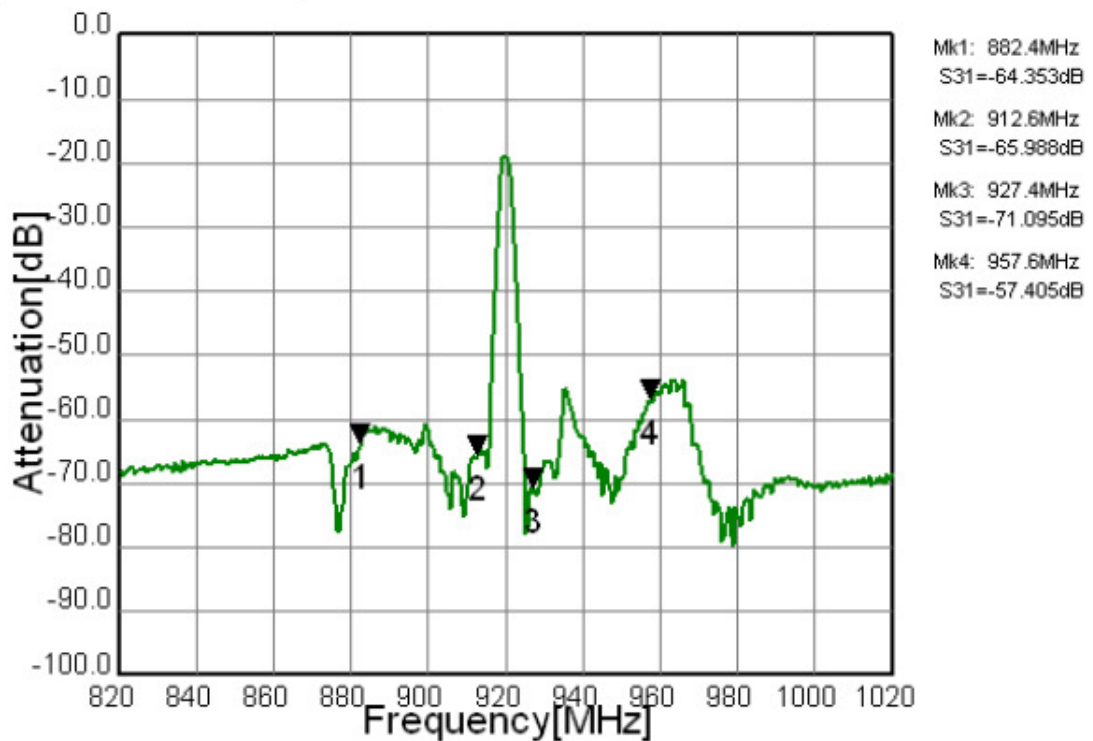
#### Ant to Rx



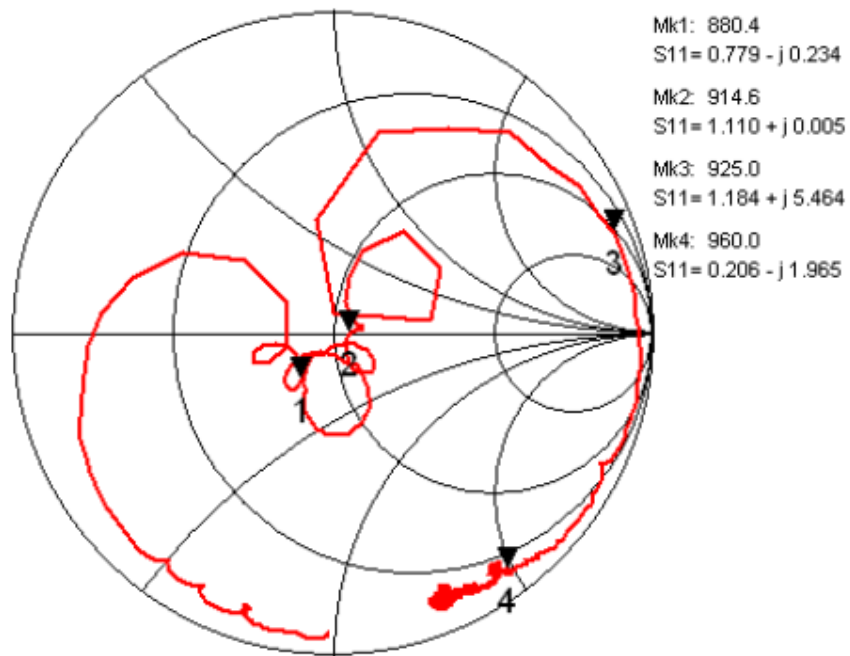
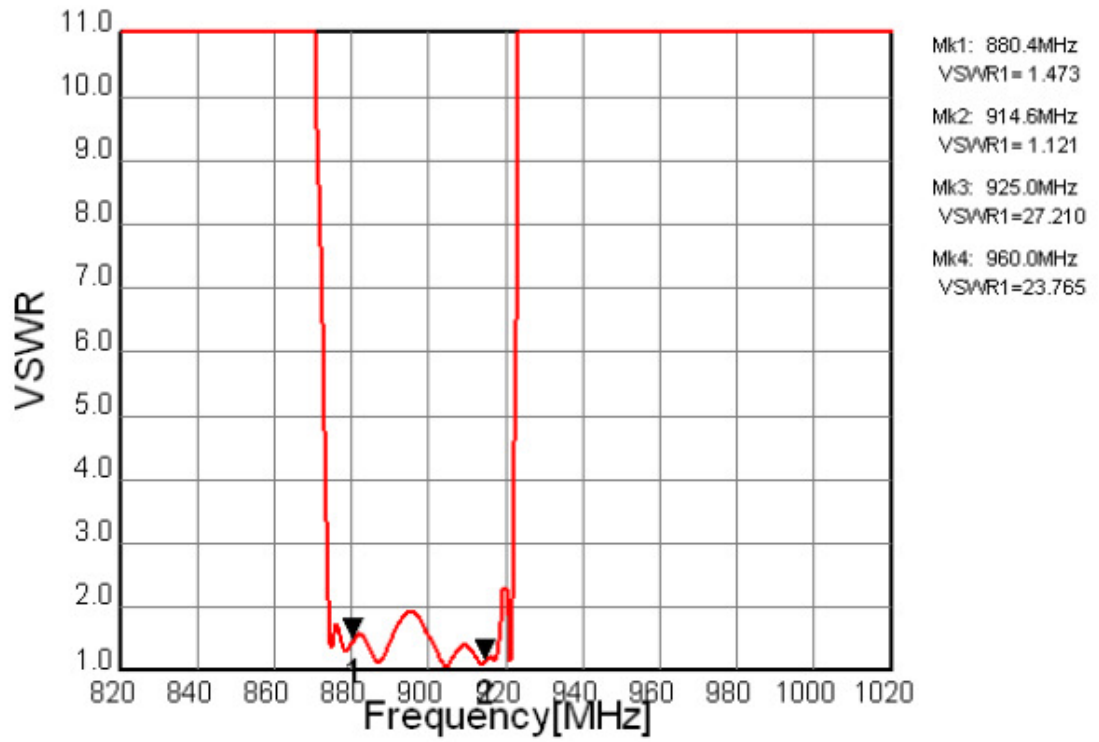
## Tx to Ant, Ant to Rx



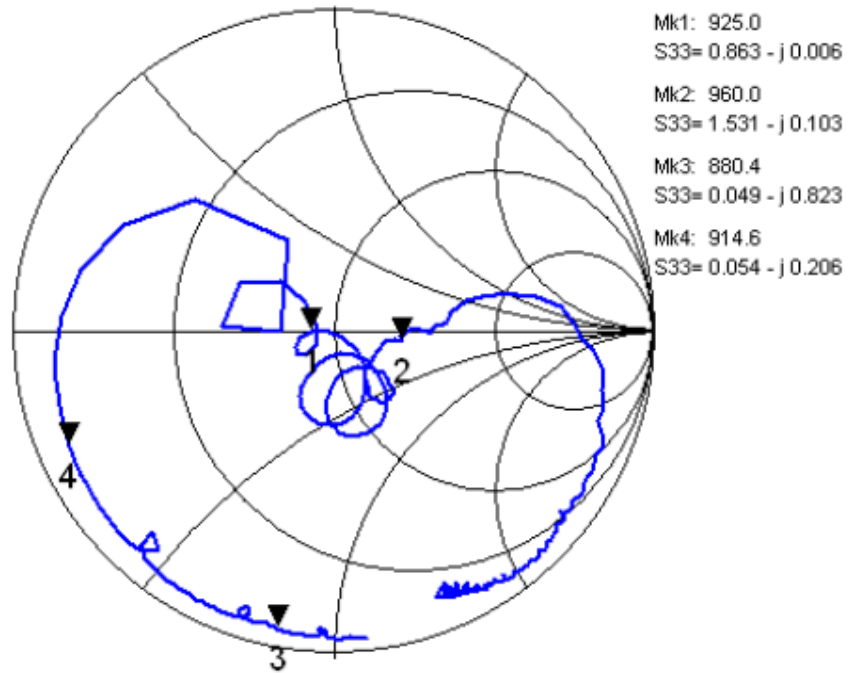
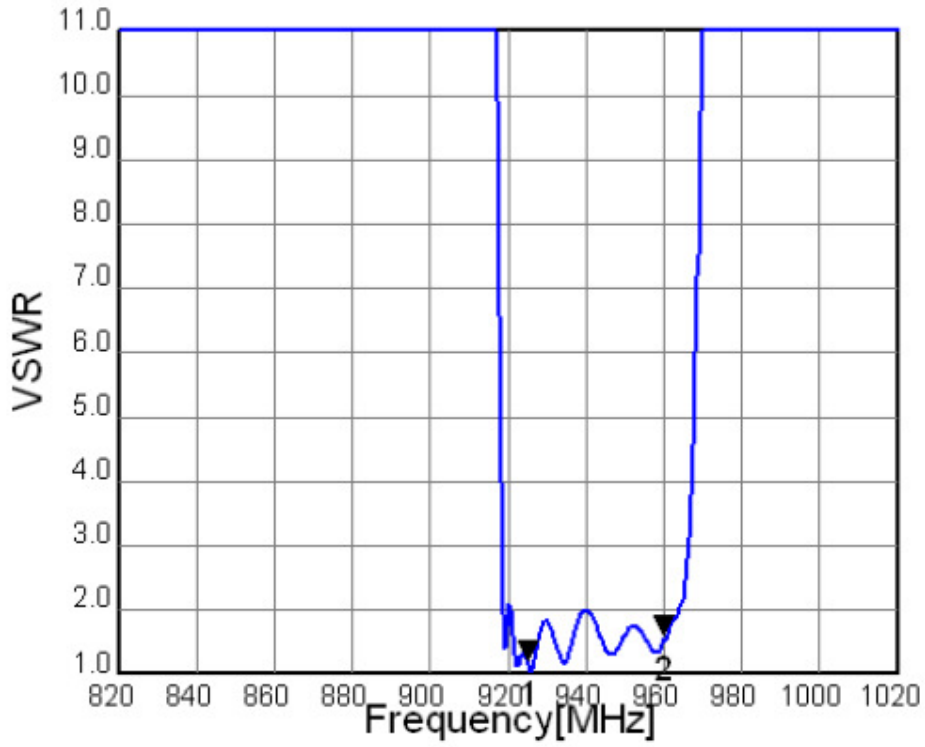
## Tx to Rx Isolation



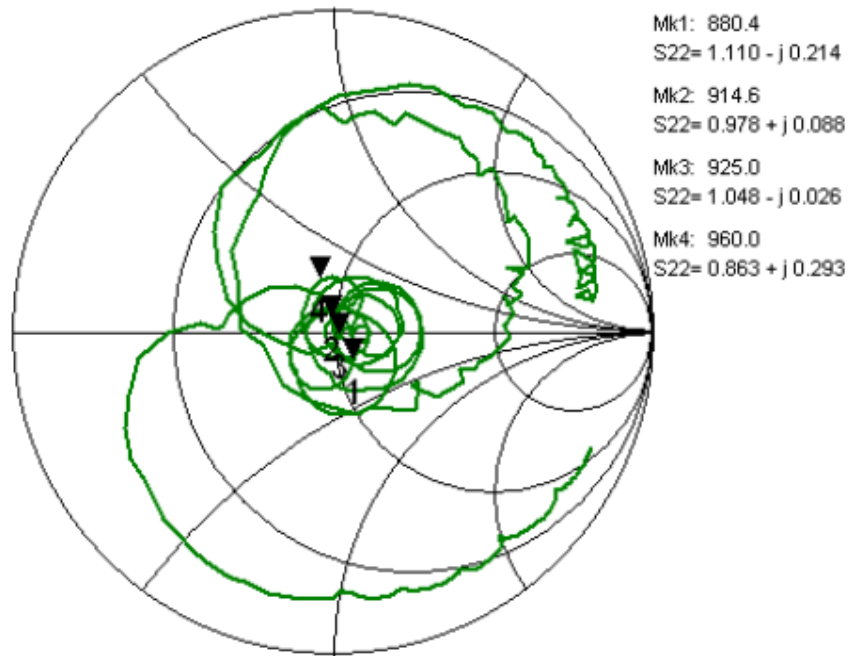
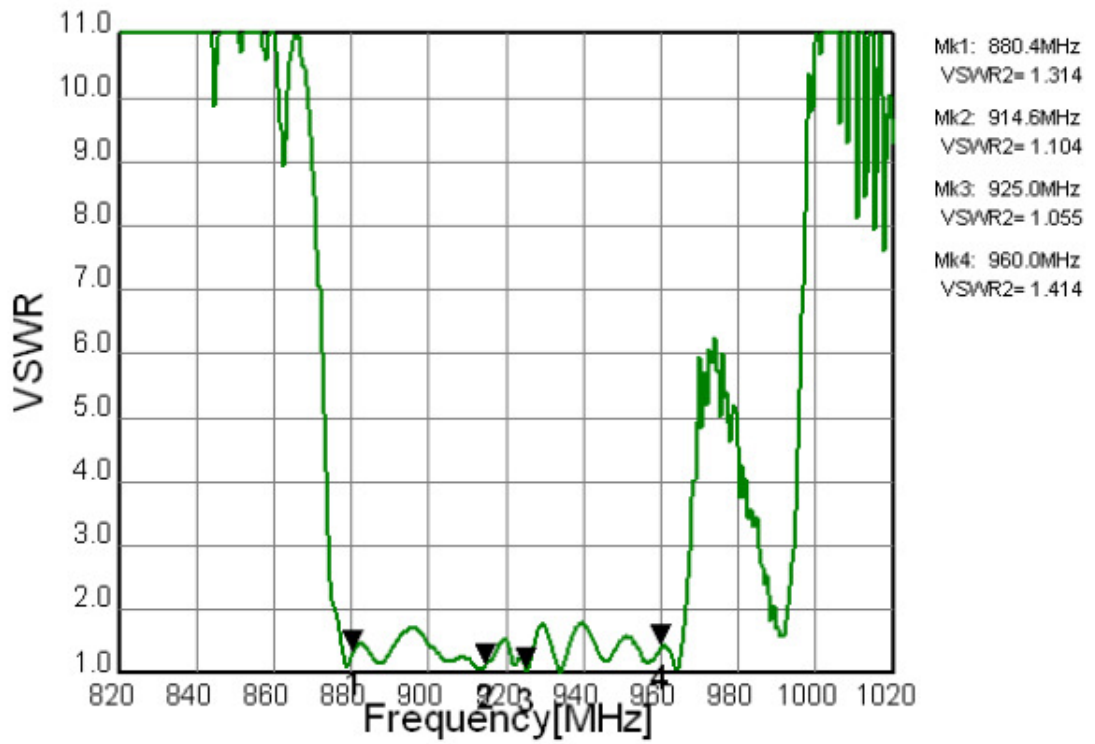
# Tx Port



# Rx Port

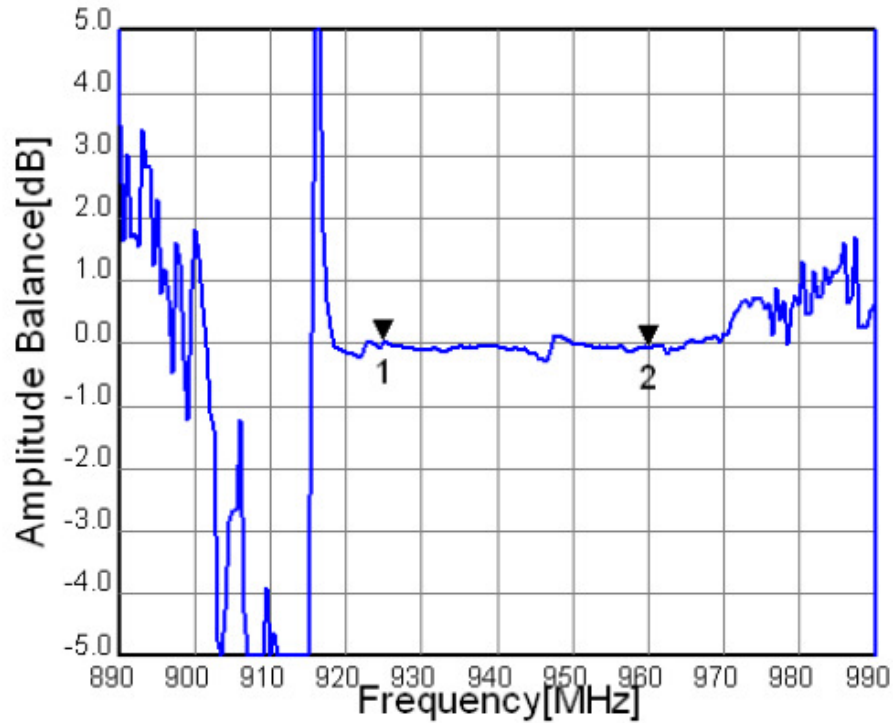


# Ant Port





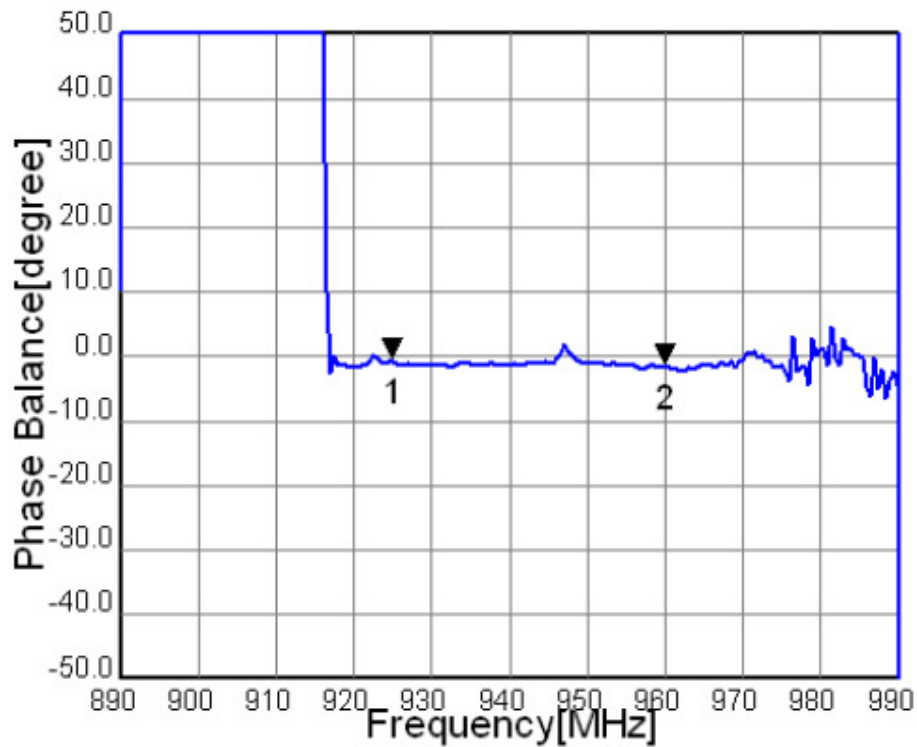
## Ant to Rx (Amplitude balance)



Mk1: 925.0MHz  
A Bal= 0.015dB

Mk2: 960.0MHz  
A Bal=-0.064dB

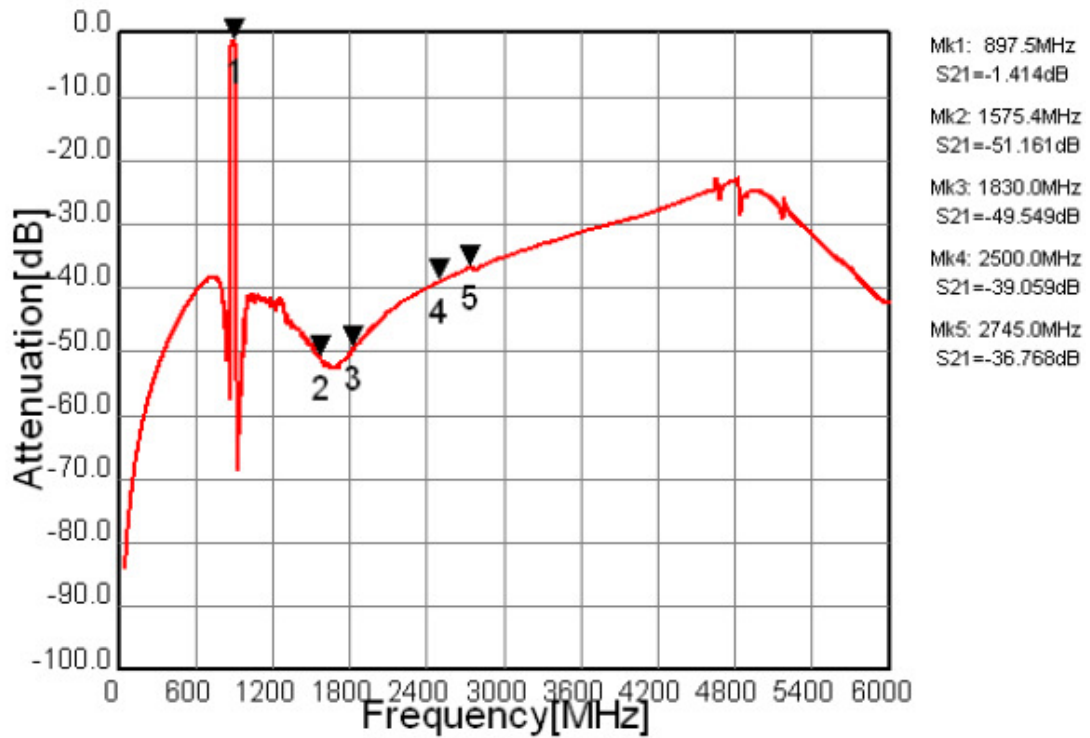
## Ant to Rx (Phase balance)



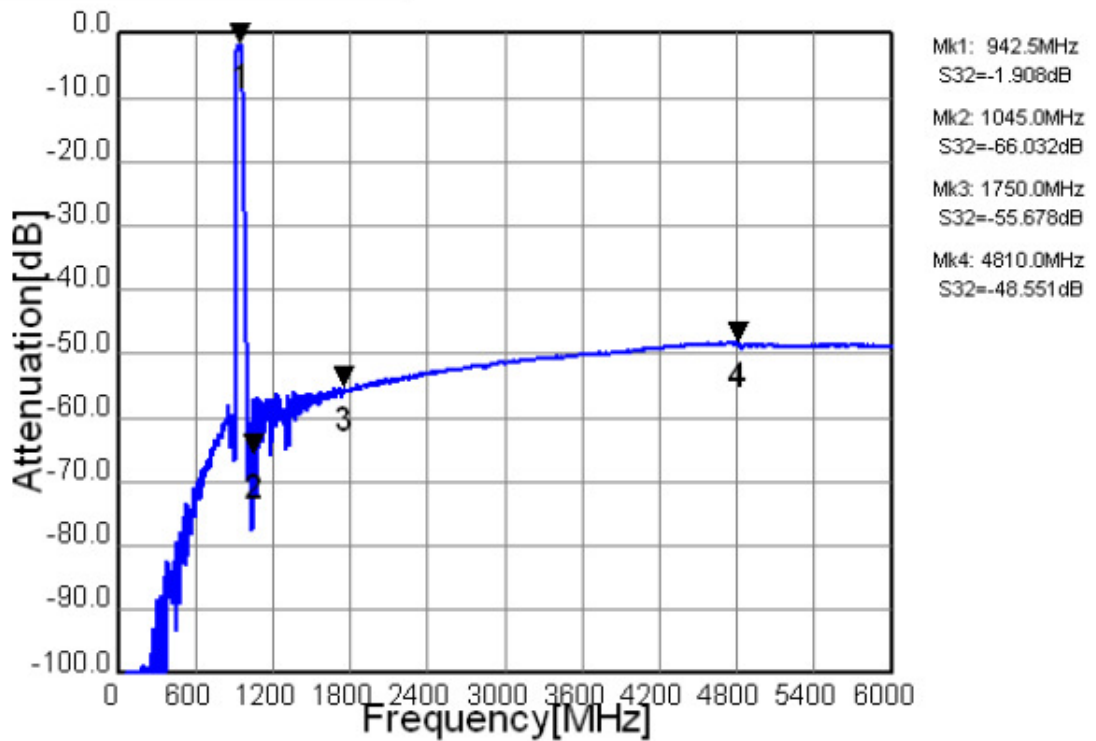
Mk1: 925.0MHz  
P Bal=-0.687deg

Mk2: 960.0MHz  
P Bal=-1.743deg

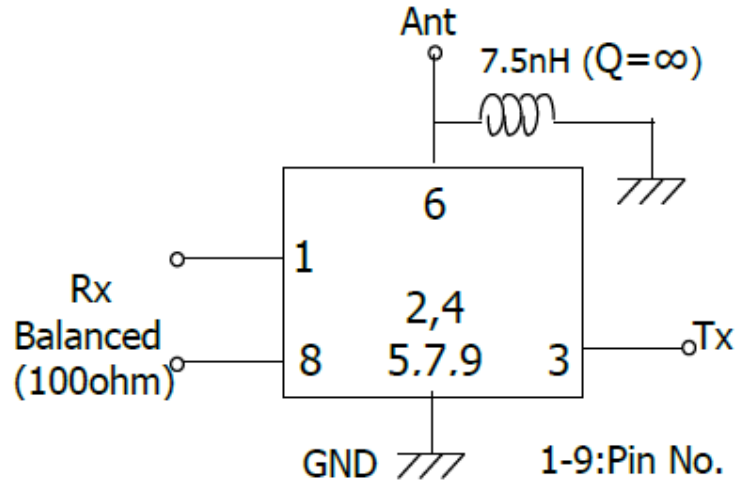
## Tx to Ant (Wide span)



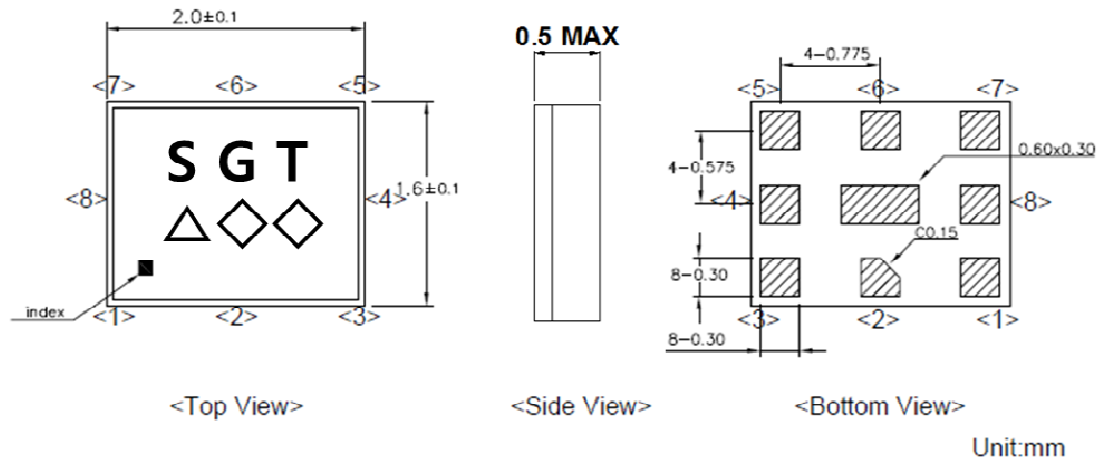
## Ant to Rx (Wide span)



**D. MEASUREMENT CIRCUIT:**



**E. OUTLINE DRAWING:**



Pin Description	
2,4,5,7,9	Ground
6	Ant
3	Tx
1,8	Rx

Marking name : **SGT**

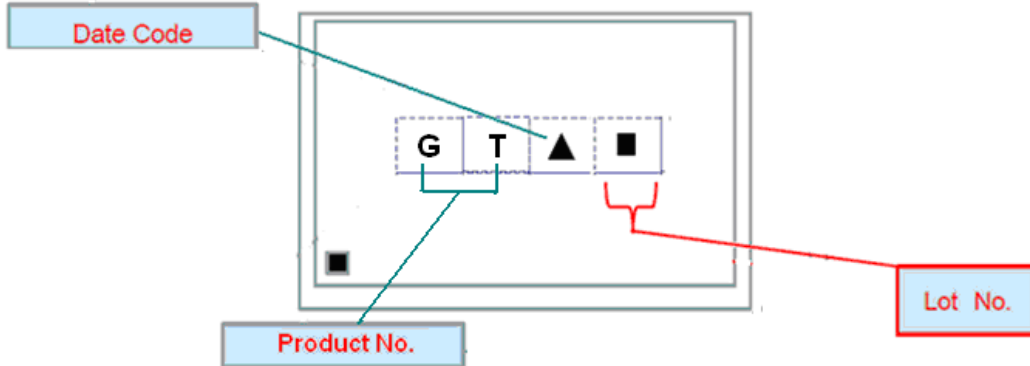
△ : Date code( 2016 May → s ,....., 2019 Dec→m.)

◇◇: Lot Code.

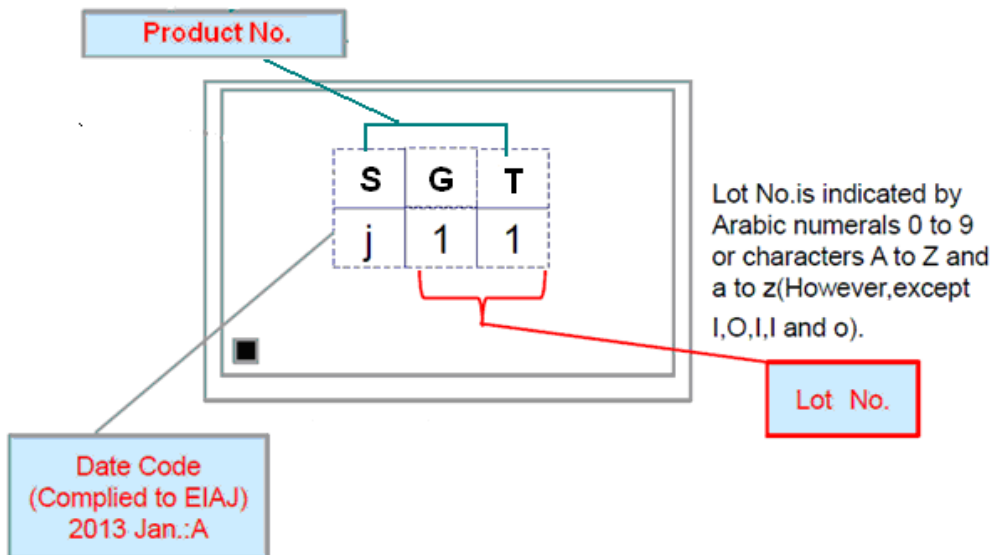
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2016	n	p	q	r	s	t	u	v	w	x	y	z

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
2019	a	b	c	d	e	f	g	h	j	k	l	m

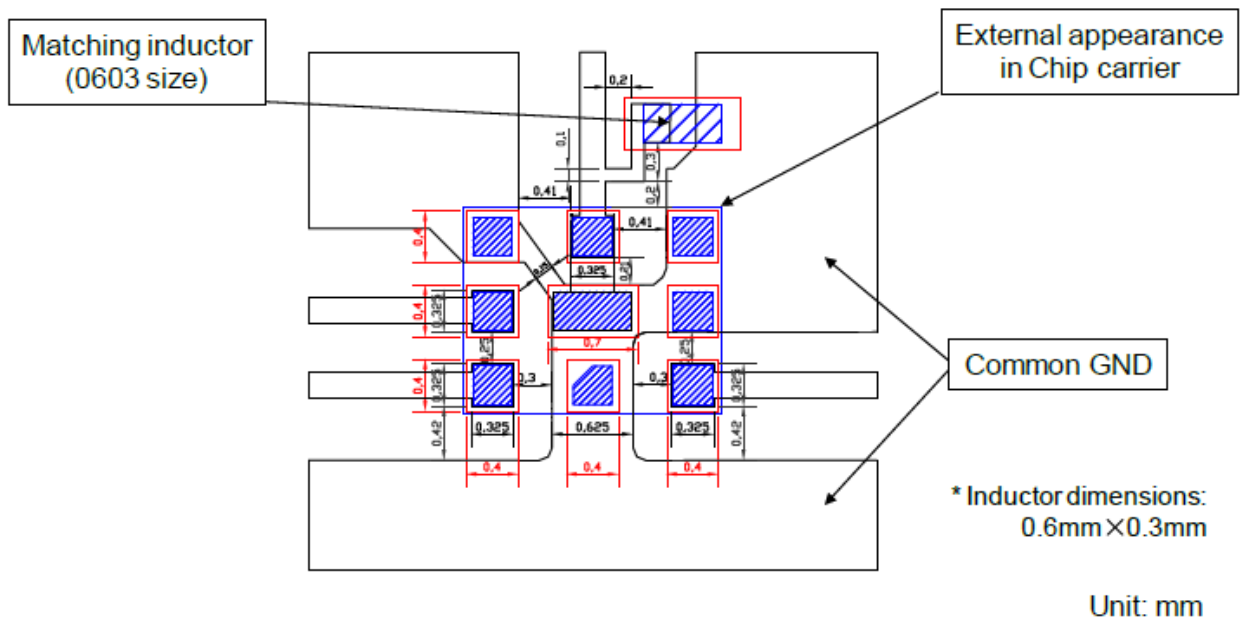
**Top View(Sample Run)**



**Top View(Pilot Run)**



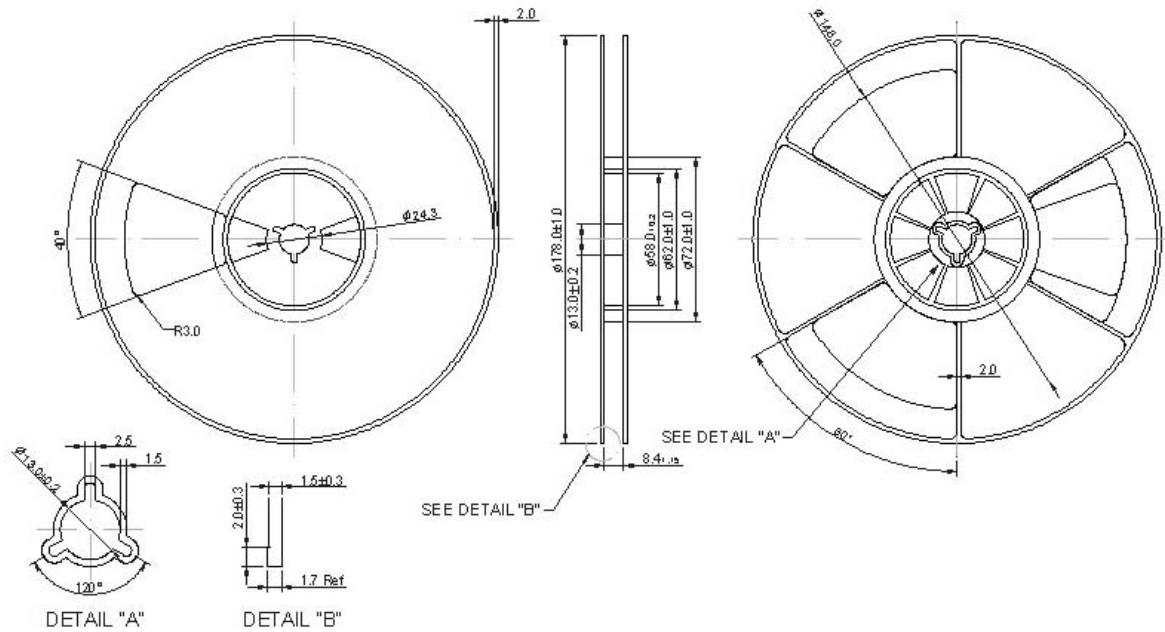
**F. FOOTPRINT:**



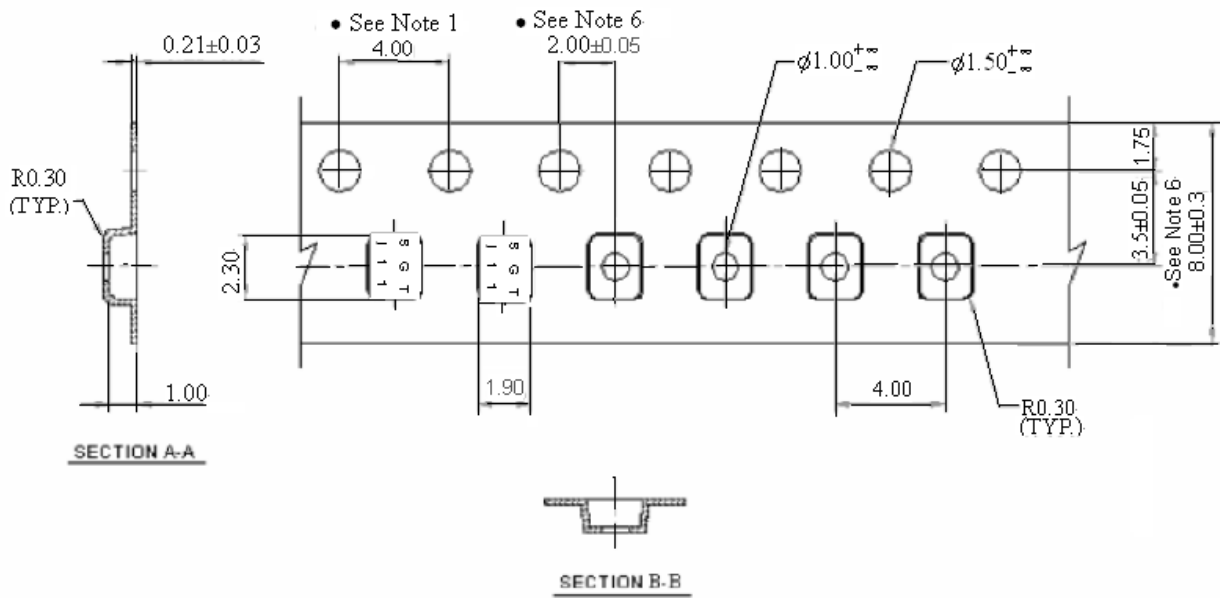
## G. Packing:

### 1. REEL DIMENSION

(Please refer to FR-75D10 for packing quantity)

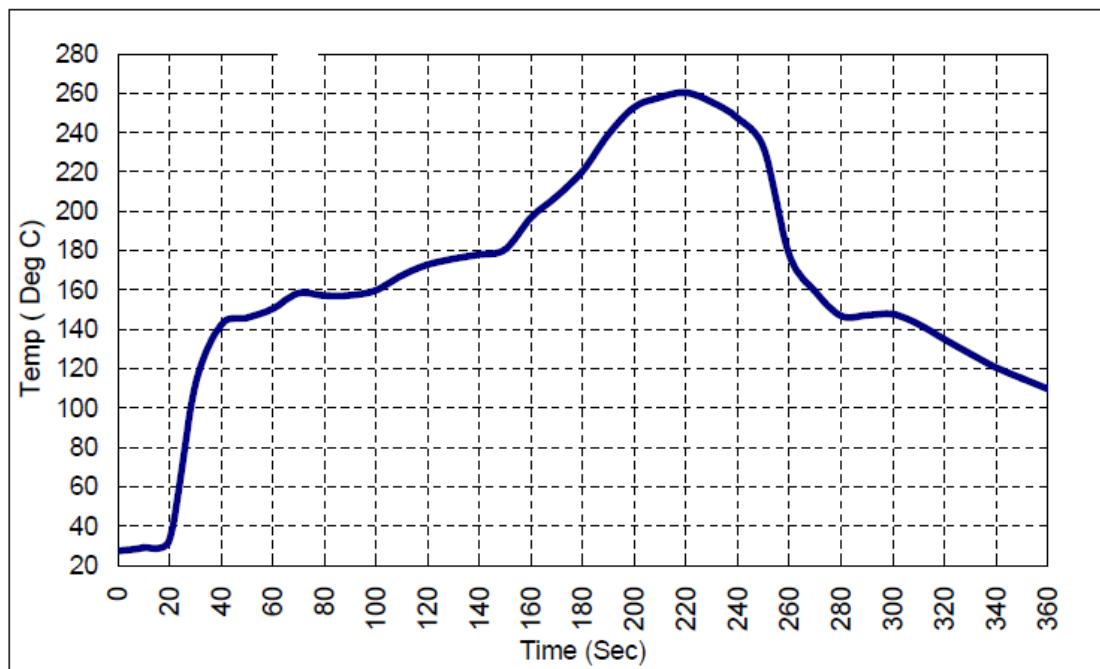


### 2. TAPE DIMENSION



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



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