

SAW Filter 434.42MHz

MODEL NO.:TA1789A

REV. NO.:2.0

A. MAXIMUM RATING:

1. Input Power Level: 13 dBm
2. DC Voltage : 0V
3. Operating Temperature: -40°C to +105°C
4. Storage Temperature: -40°C to +105°C
5. Moisture Sensitive Level (MSL): Level 1

RoHS Compliant
Lead free
Lead-free soldering

Electrostatic Sensitive Device (ESD)

B. ELECTRICAL CHARACTERISTICS:

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

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

Item	Unit	Min	Type.	Max
Center Frequency F_c	MHz	-	434.42	-
Minimum Insertion Loss α_{min}				
Incl. Loss in matching elements (433.885 ~ 434.955 MHz)	dB		2.2	2.9
Excl. Loss in matching elements (433.585 ~ 434.955 MHz)	dB		1.4	2.1
Pass Band (Relative to α_{min})				
433.885 ~ 434.955 MHz ¹			1.1	2.5
433.87 ~ 434.97 MHz ²			1.3	3.0
Relative Attenuation (Relative to α_{min}) α_{rel}				
10 ~ 350 MHz	dB	50	55	
350 ~ 414 MHz	dB	30	35	
414 ~ 425 MHz	dB	30	35	
425 ~ 432.72 MHz	dB	13	17	
436.42 ~ 437.3 MHz	dB	13	17	
437.3 ~ 438 MHz	dB	22	27	
438 ~ 446 MHz	dB	25	30	
446 ~ 455 MHz	dB	25	30	
455 ~ 480 MHz	dB	28	33	
480 ~ 800 MHz	dB	40	45	
800 ~ 1700 MHz	dB	52	57	
1700 ~ 2500 MHz	dB	42	47	
Package size	mm	SMD 3x3		

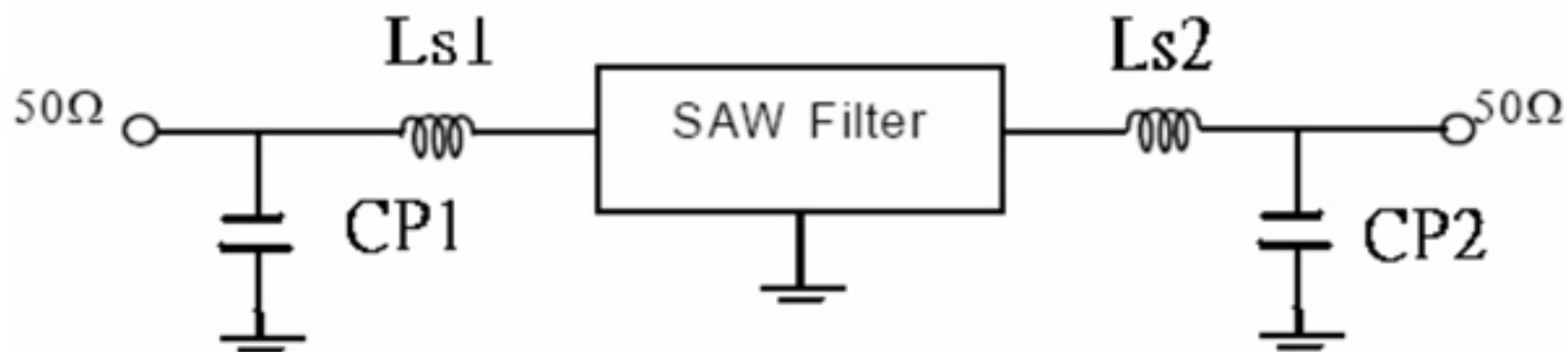
TST DCC

Impedance for pass band matching)			
Input: $Z_{IN} = Ls1/Cp1$	nH		82/8.2
Output: $Z_{OUT} = Ls2/Cp2$	nH		68/1

- 1) 433.885 ... 434.90 MHz for extended temperature range $-40\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$.
- 2) 433.870 ... 434.915 MHz for extended temperature range $-40\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$.

C. TEST CIRCUIT:

The matching circuit is



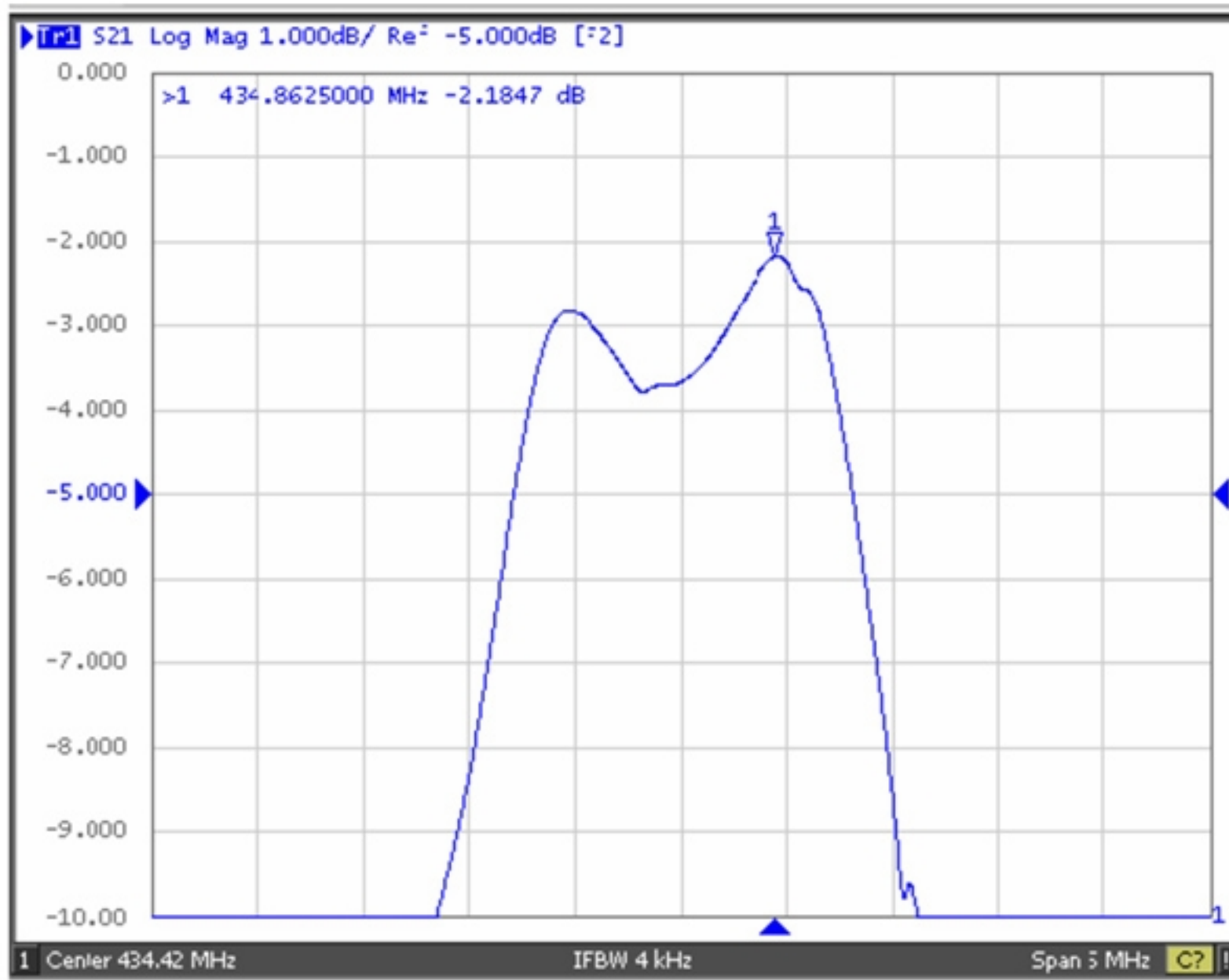
$Ls1=82\text{nH}$; $Ls2=68\text{nH}$; $Cp1=8.2\text{ pF}$; $Cp2=1\text{pF}$

D. Frequency Characteristics:

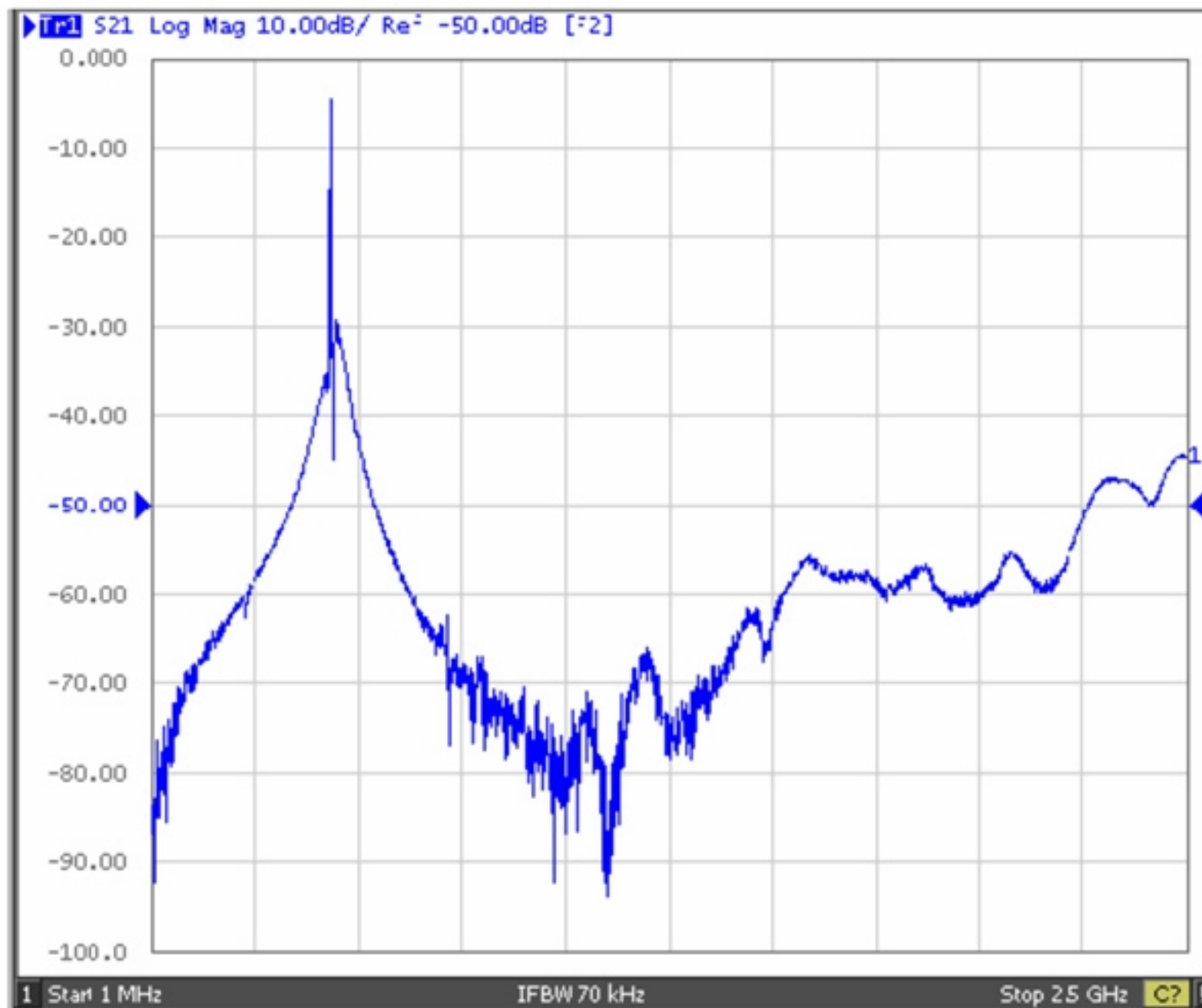
S21 response: span 20MHz



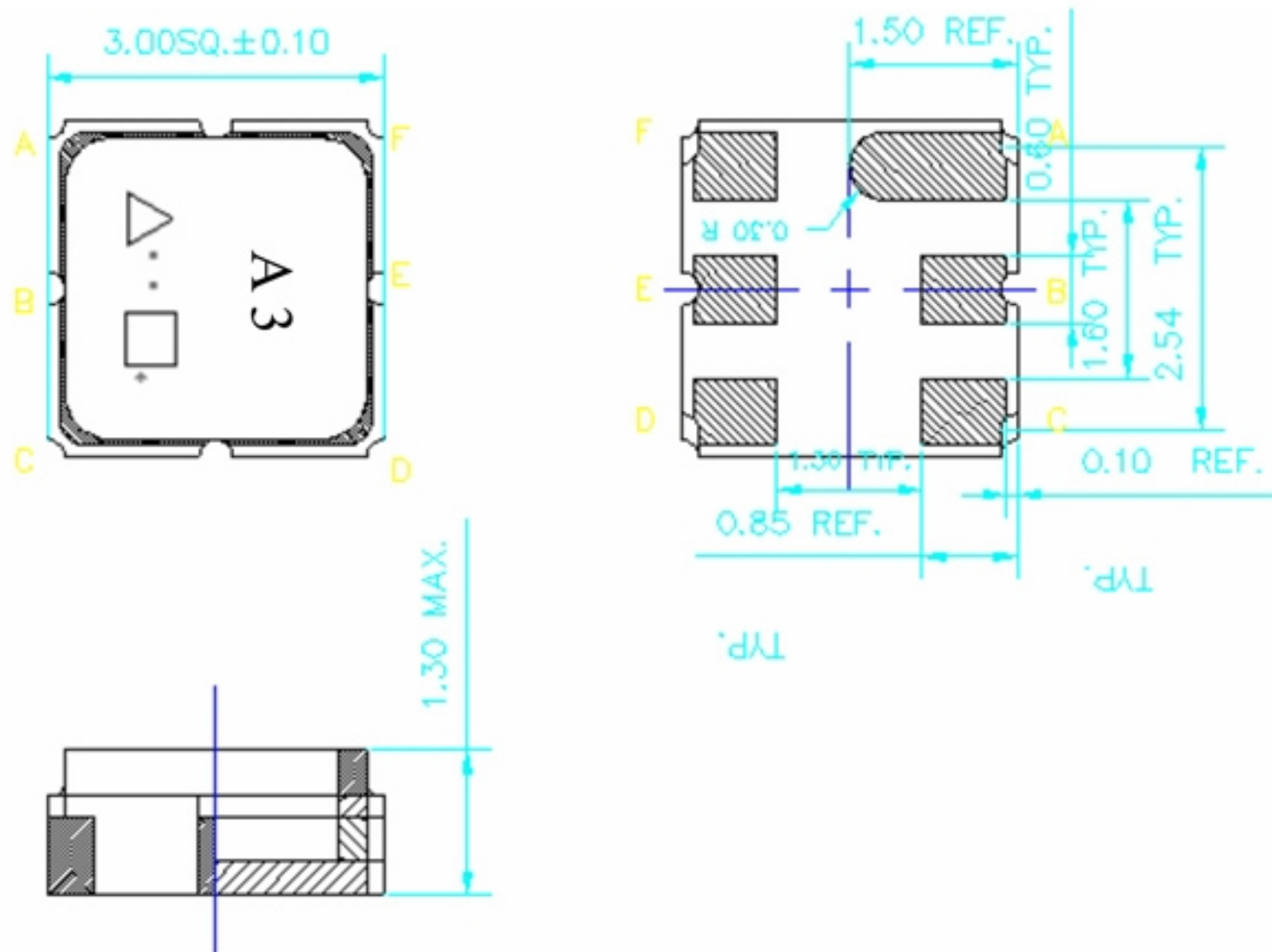
S21 response: span 5MHz



S21 response: 1MHz ~ 2.5GHz



E.OUTLINE DRAWING:



- #A: Input or input ground
 - #B: Input or input ground
 - #D: Output or output ground
 - #E: Output or output ground
 - #C.F Ground
 - △: Year code(ex 2008-> 8)
 - : Date code
- Unit:mm

Data code : See the table

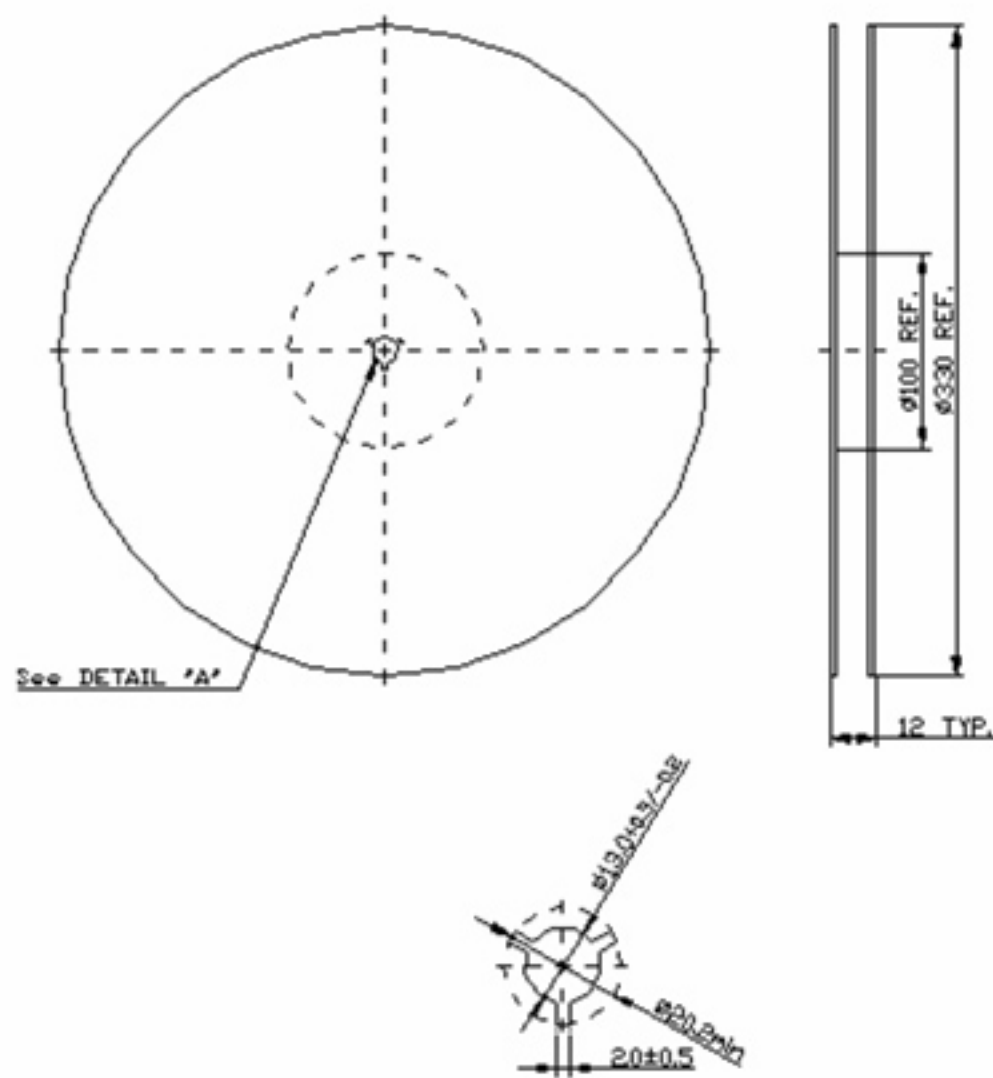
WK	01	02	...	26	27	28	...	52
Code	A	B	...	Z	a	b	...	z

△ Year code : See the table

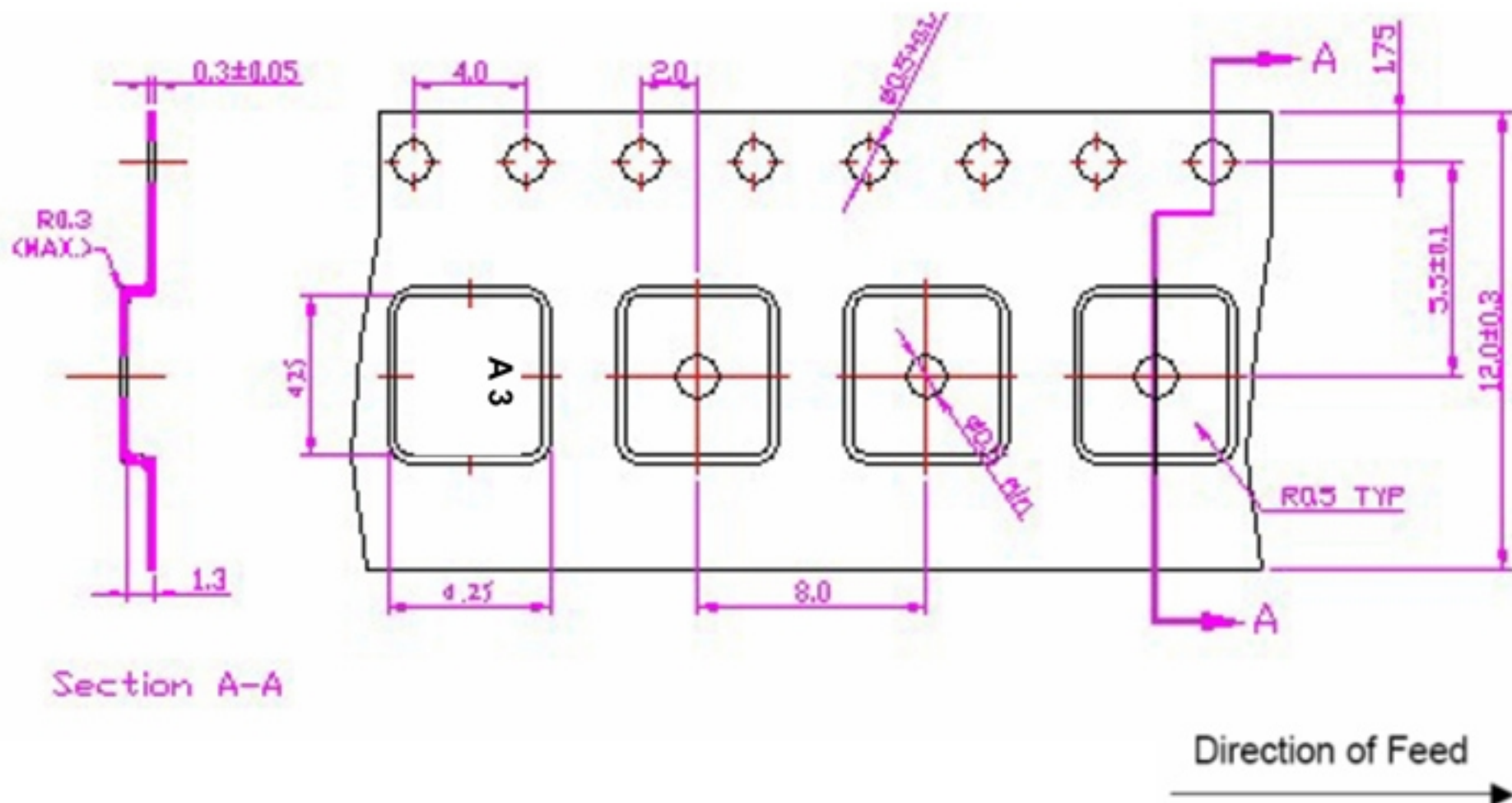
Year	2008	2009	2010	2011	...	2019	2020
Code	8	9	0	1	...	9	0

F. PACKING:

1. REEL DIMENSION



2. TAPE DIMENSION



G. 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.

