

SAW Filter 248.45 MHz

MODEL NO.:TB1327A

REV. NO.:1.0

A. MAXIMUM RATING:

1. Maximum Input Power: 15 dBm
2. Maximum DC Voltage: 3 V
3. Operating Temperature: -30 °C to +85 °C
4. Storage Temperature: -40 °C to +85 °C
5. Moisture Sensitivity Level: Level 1 (MSL 1)

RoHS Compliant
Lead free
Lead-free soldering

Electrostatic Sensitive Device (ESD)

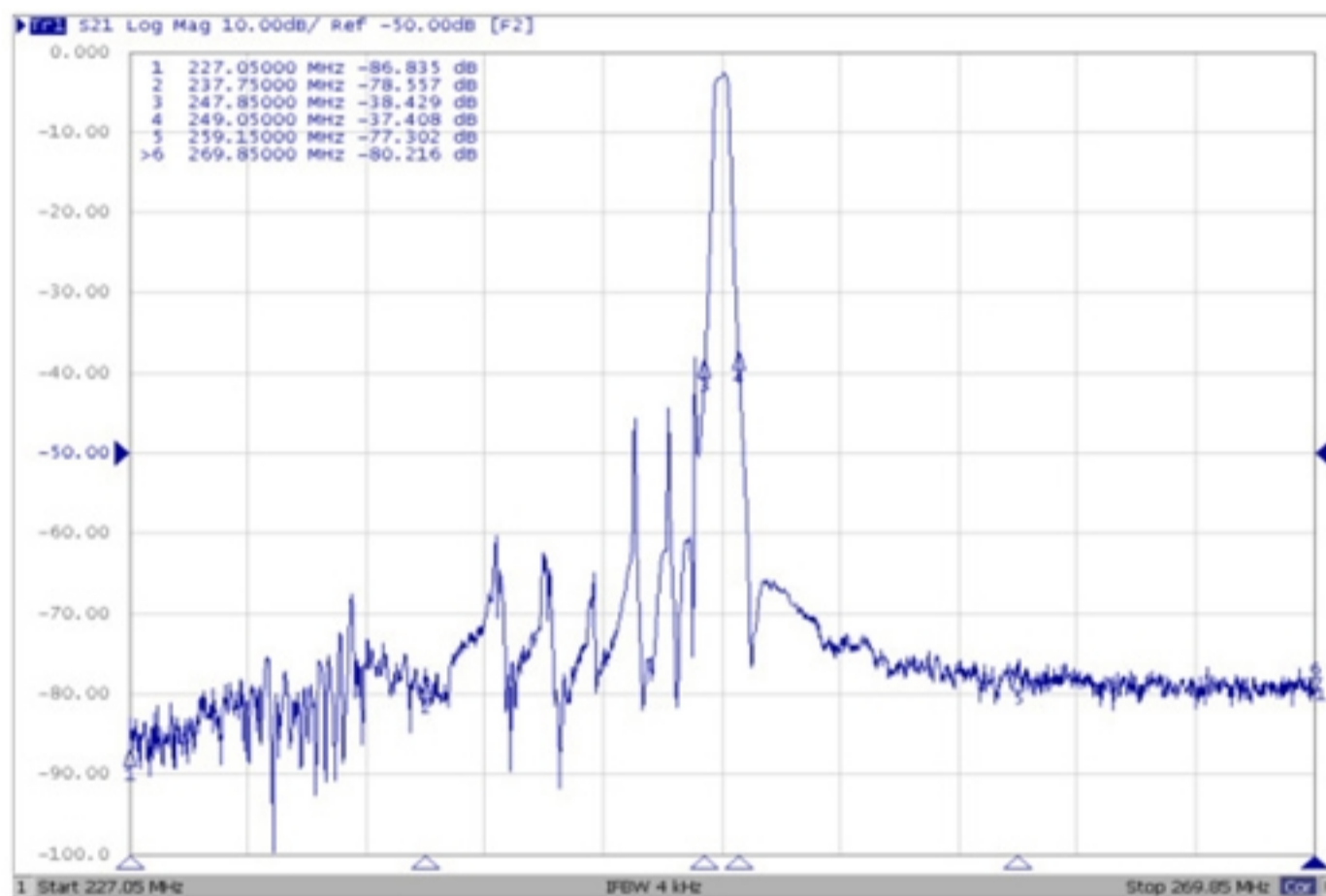
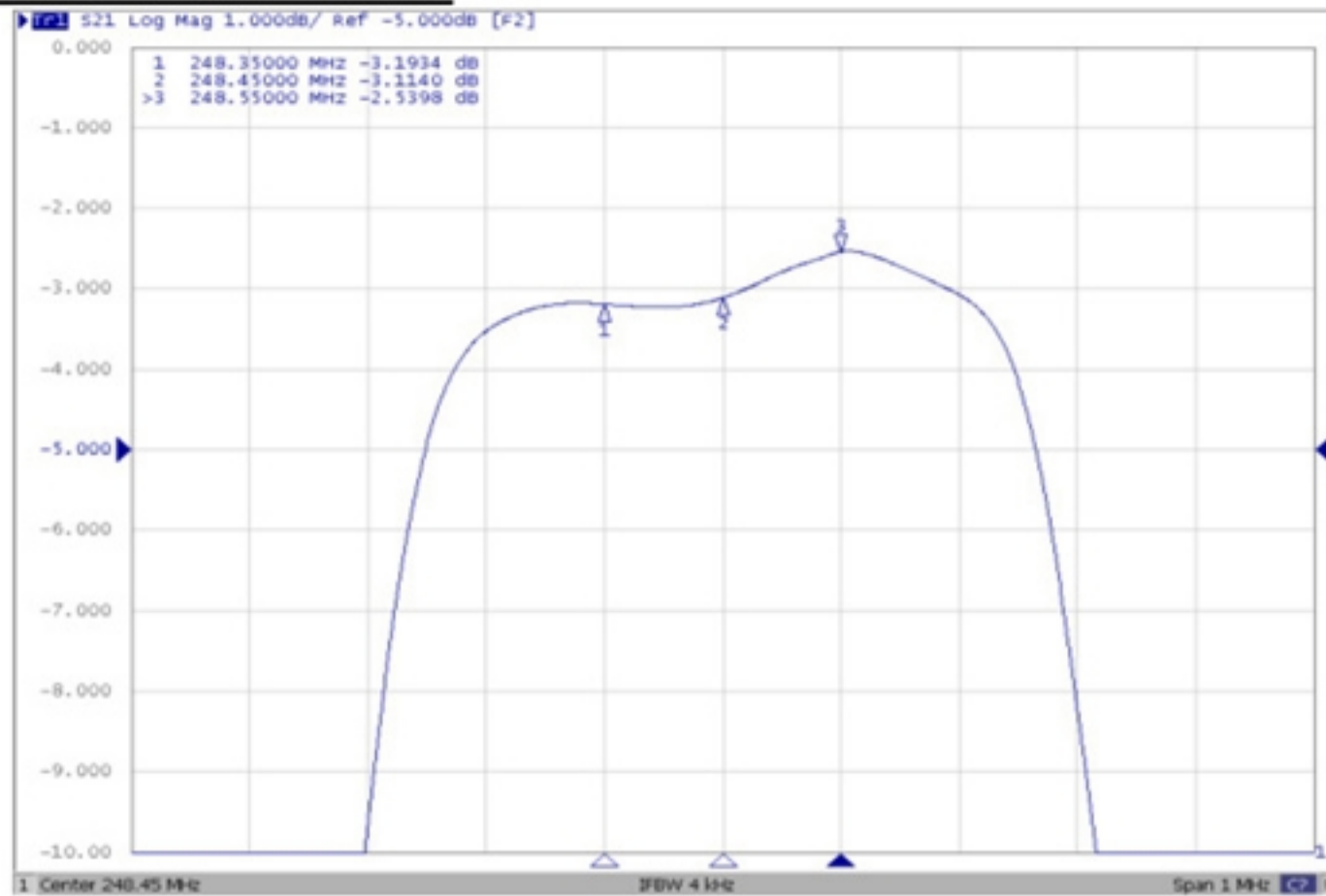
B. ELECTRICAL CHARACTERISTICS:

Terminating source impedance: $Z_s = 50 \Omega$

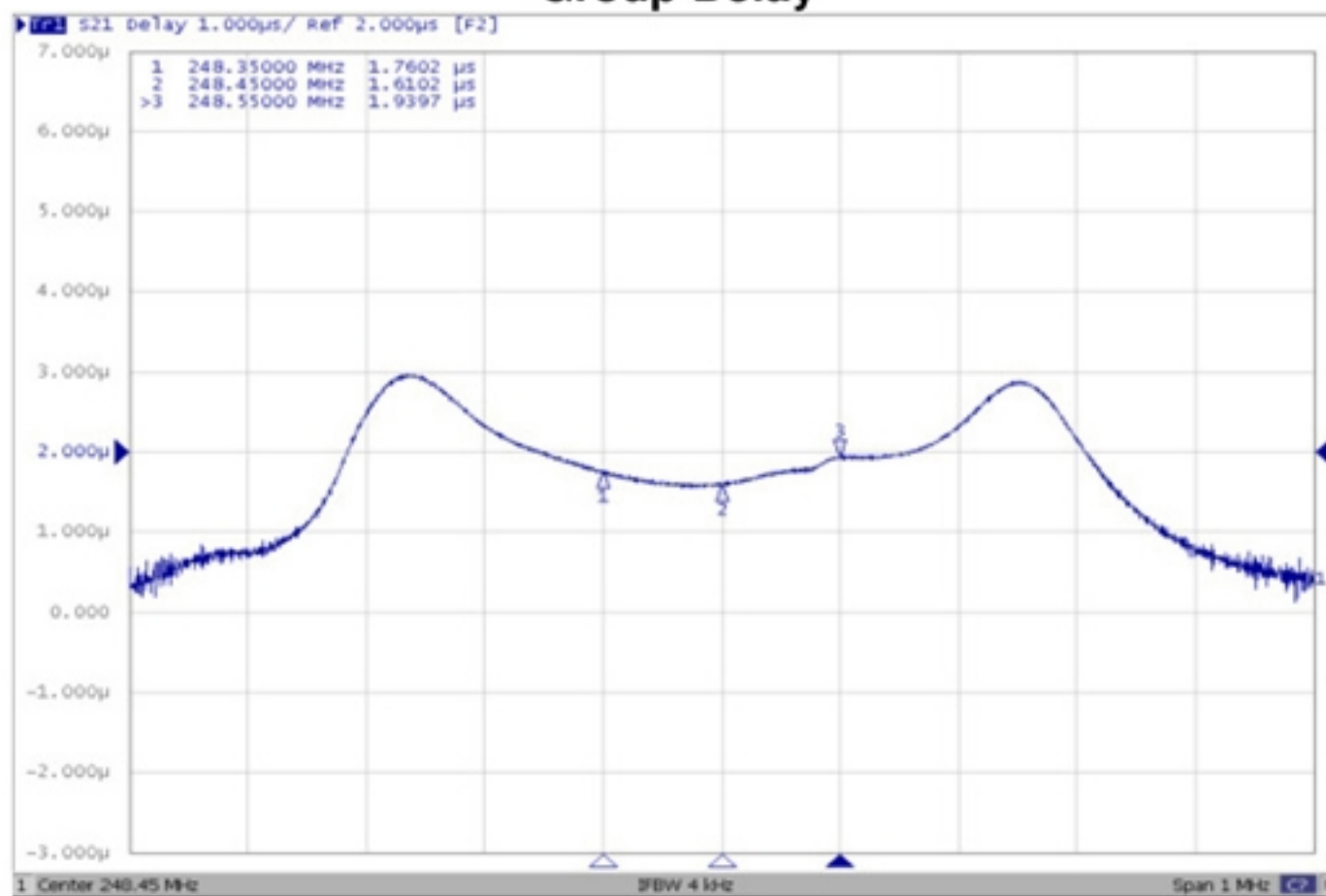
Terminating load impedance: $Z_L = 50 \Omega$

| Parameters Description | Unit | Min. | Typ. | Max. |
|--|-----------|------|--------|------|
| Center Frequency Fc | MHz | - | 248.45 | - |
| 3 dB Bandwidth BW | MHz | - | 0.53 | - |
| Insertion Loss at Fo IL | dB | - | 3.1 | 4.5 |
| Amplitude Ripple (Fo 0.1 MHz) | dB | - | 0.7 | 1.0 |
| Group Delay Ripple (Fo 0.1 MHz) | μ sec | - | 0.4 | 1.0 |
| Attenuation (Reference level from 0 dB) | | | | |
| Fo 0.6 MHz | dB | 25 | 37 | - |
| Fo 10.7 MHz | dB | 40 | 75 | - |
| Fo 21.4 MHz | dB | 60 | 78 | - |

C. FREQUENCY CHARACTERISTIC:

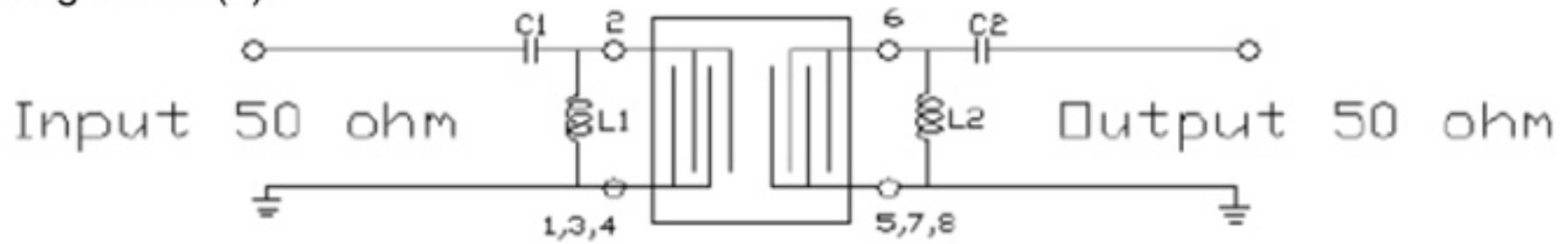


Group Delay



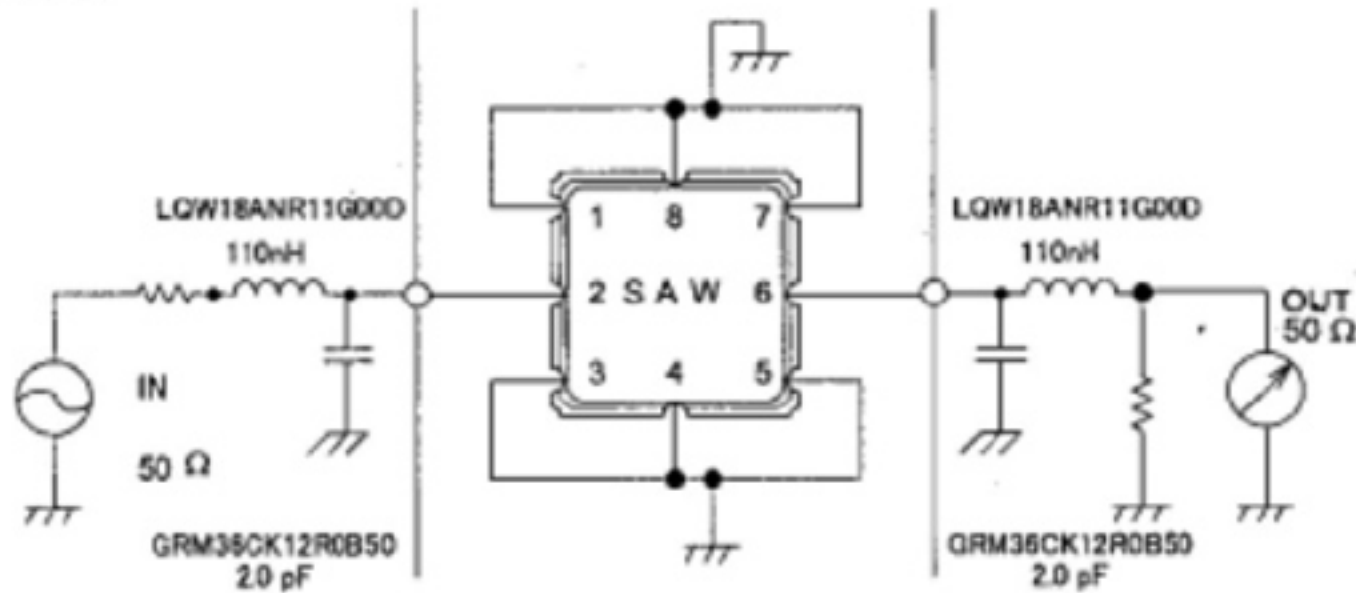
D. MEASUREMENT CIRCUIT:

Matching circuit (1):

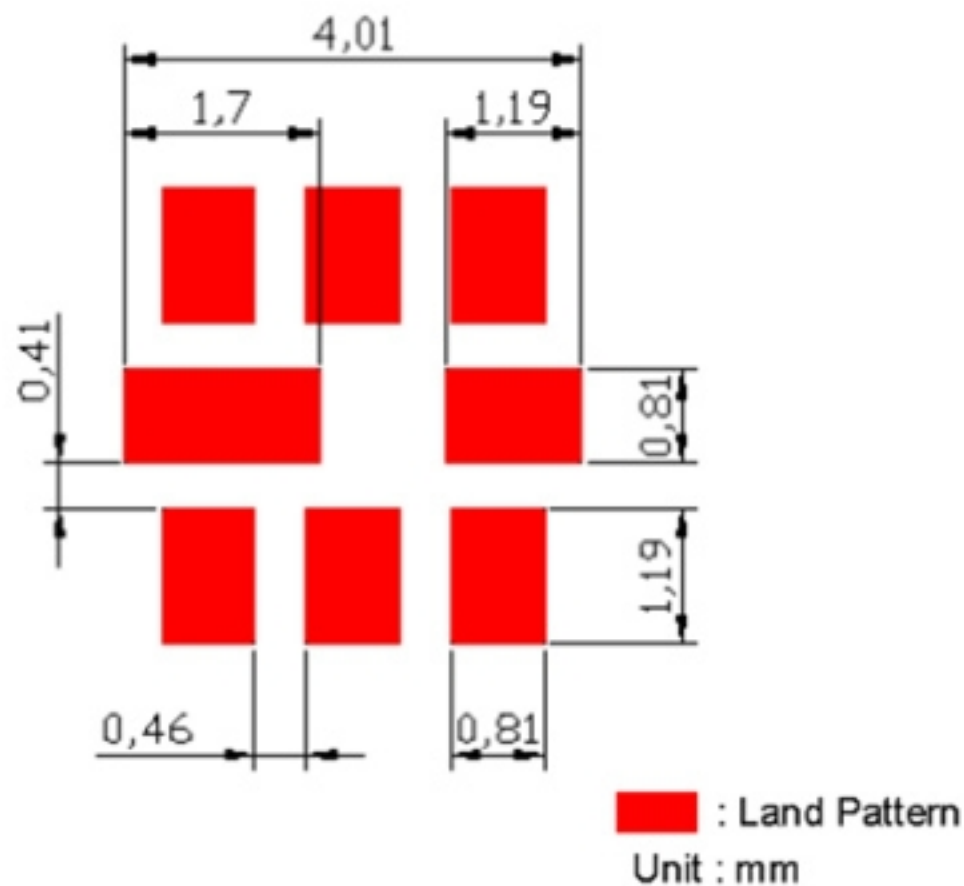


$$L1=75\text{nH} \quad C1=3.3\text{pF} \quad L2=68\text{nH} \quad C2=5\text{pF}$$

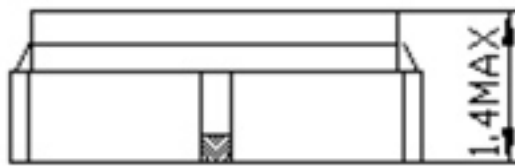
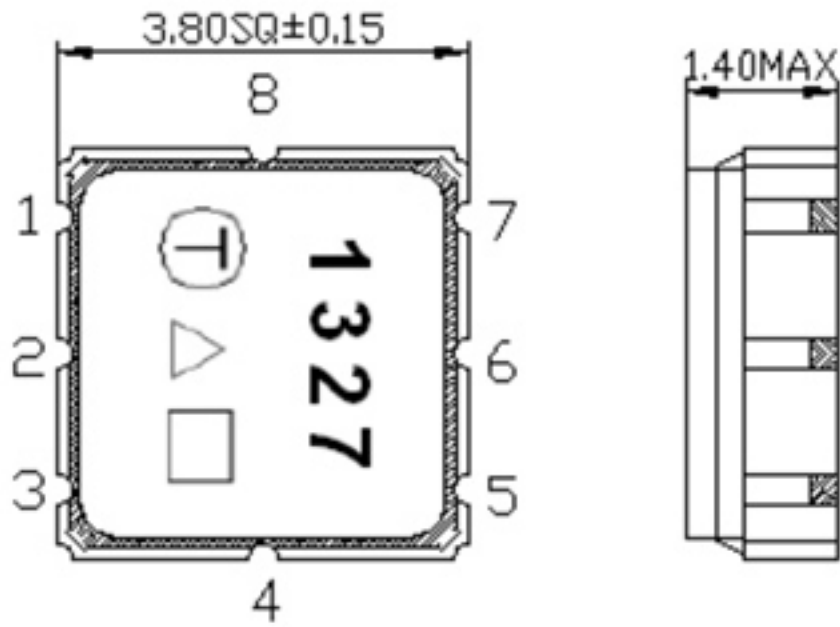
Matching circuit (2):



E. PCB Footprint:

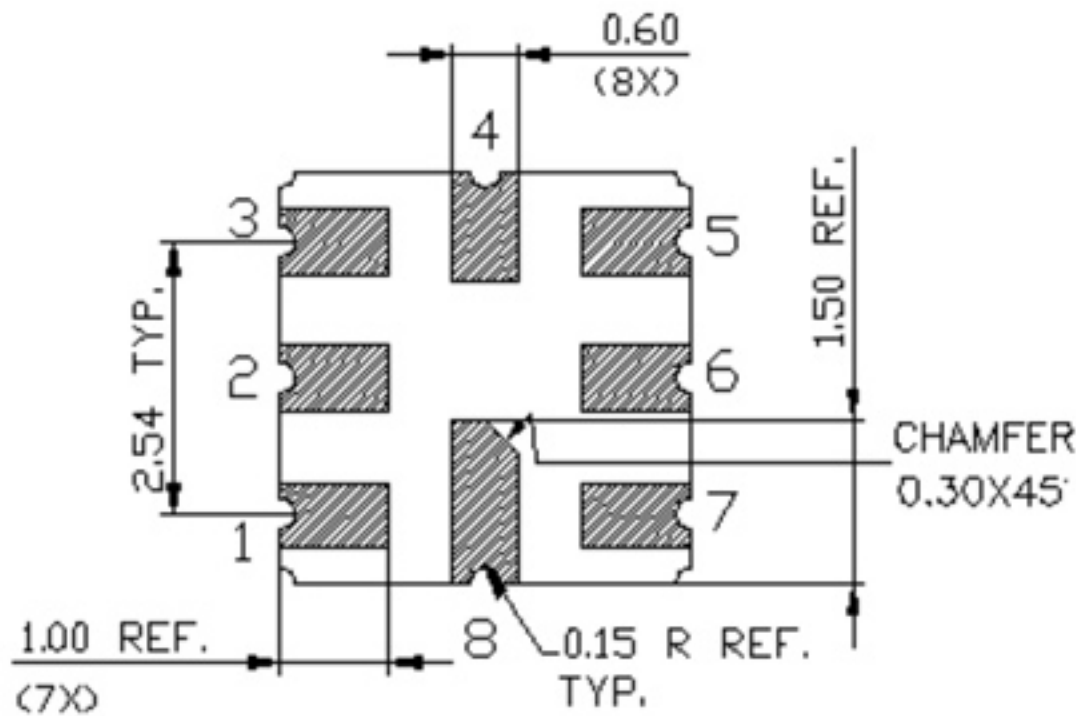


F. OUTLINE DRAWING:



Unit : mm

Not Specified Tolerance : +/-0.15 mm



| Pin No. | Symbol | Function |
|---------|--------|----------|
| 1 | GND | Ground |
| 2 | IN | Input |
| 3 | GND | Ground |
| 4 | GND | Ground |
| 5 | GND | Ground |
| 6 | OUT | Output |
| 7 | GND | Ground |
| 8 | GND | Ground |

△ : Year Code

□ : Date Code

Unit: mm

△ Product Year Code

| | | |
|--------------|------------------------------|------------------------------|
| Year | 2017 2019 2021 2023 | 2018 2020 2022 2024 |
| Product Code | B | b |

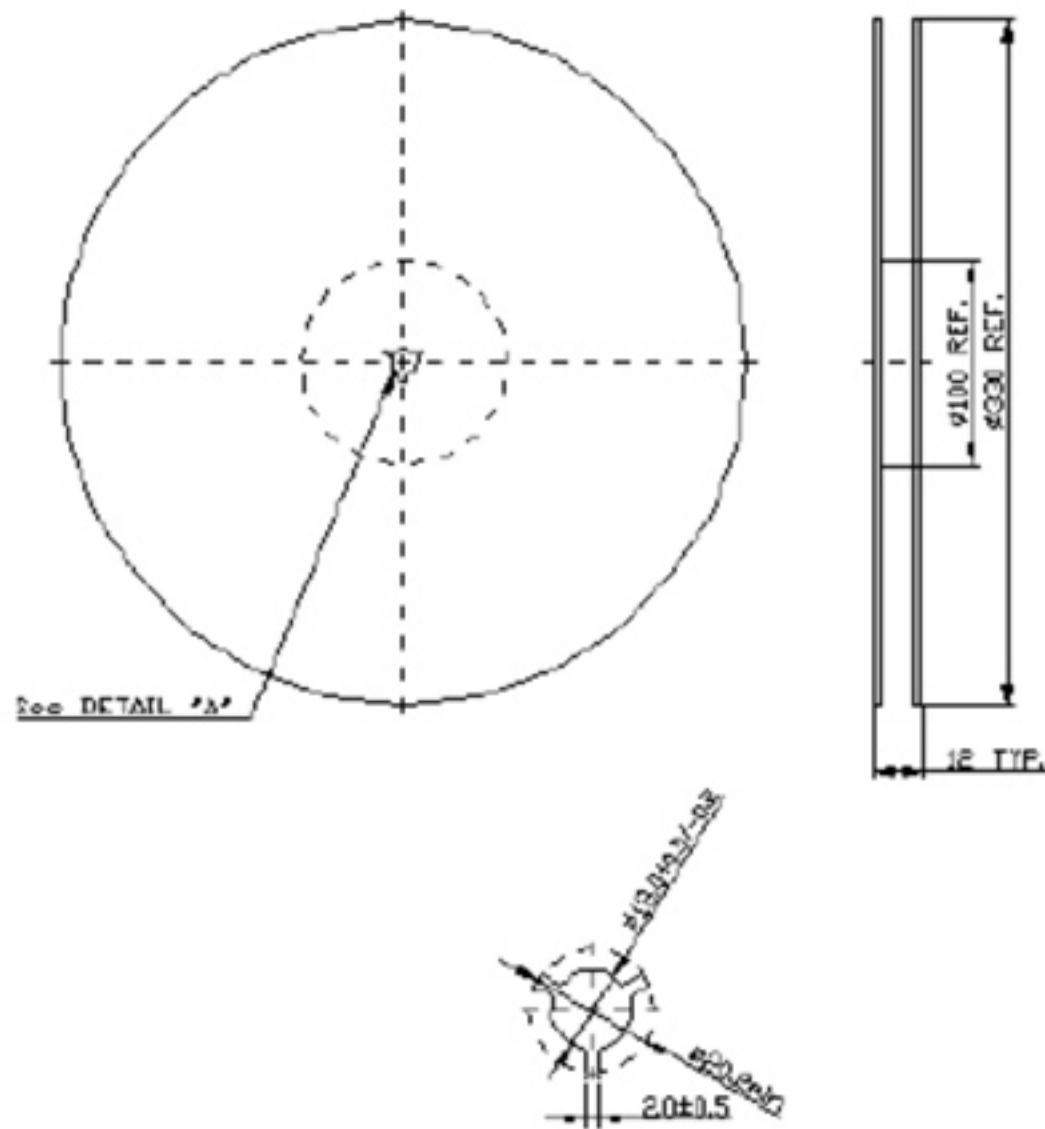
Date Code Table:

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| WK01 | WK02 | WK03 | WK04 | WK05 | WK06 | WK07 | WK08 | WK09 | WK10 | WK11 | WK12 | WK13 |
| A | B | C | D | E | F | G | H | I | J | K | L | M |
| WK14 | WK15 | WK16 | WK17 | WK18 | WK19 | WK20 | WK21 | WK22 | WK23 | WK24 | WK25 | WK26 |
| N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| WK27 | WK28 | WK29 | WK30 | WK31 | WK32 | WK33 | WK34 | WK35 | WK36 | WK37 | WK38 | WK39 |
| a | b | c | d | e | f | g | h | i | j | k | l | m |
| WK40 | WK41 | WK42 | WK43 | WK44 | WK45 | WK46 | WK47 | WK48 | WK49 | WK50 | WK51 | WK52 |
| n | o | p | q | r | s | t | u | v | w | x | y | z |

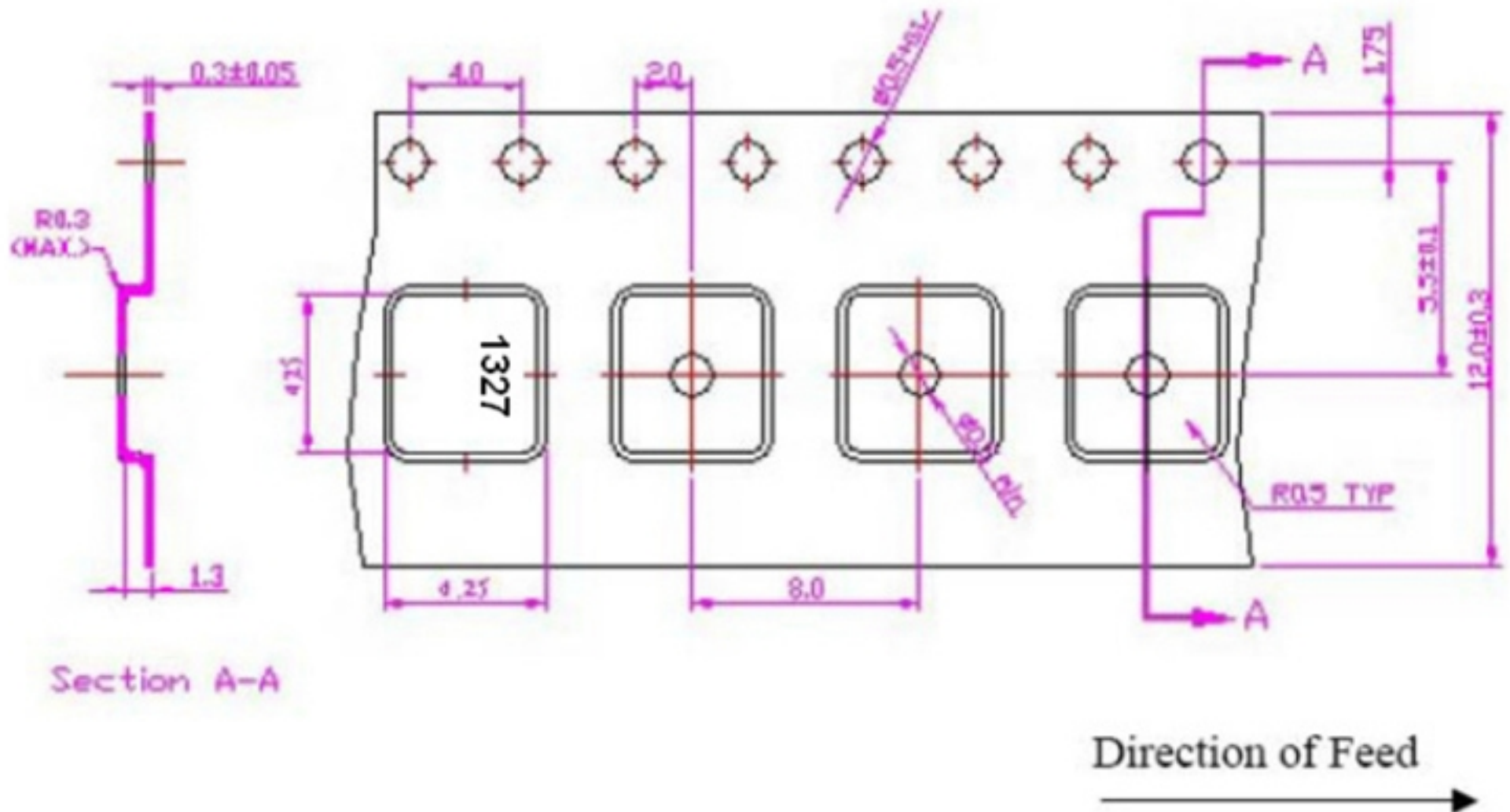
G. PACKING: (Ref: WI-75M03)

1. REEL DIMENSION

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



2. TAPE DIMENSION



H. RECOMMENDED TEMPERATURE PROFILE OF REFLOW SOLDERING:

1. Preheating shall be fixed at $150\sim 180^{\circ}\text{C}$ for $60\sim 90$ seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for $50\sim 80$ seconds and at $260^{\circ}\text{C} +0/-5^{\circ}\text{C}$ peak ($20\sim 40\text{sec}$).
4. Time: 2 times.

