



RFM Integrated Device, Inc.

PRODUCT SPECIFICATION

Part Number: SF2619J

FILTER, DIPLEXER, 1176.45/158
5.47 MHz, BW 20.46, 52.84

Preliminary

A. MAXIMUM RATING:

1. Input Power Level: 15 dBm
2. DC Voltage : 0 V
3. Operating Temperature: -40°C to +85°C
4. Storage Temperature: -40°C to +85°C
5. Moisture Sensitive Level: MSL 3



B. ELECTRICAL CHARACTERISTICS:

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

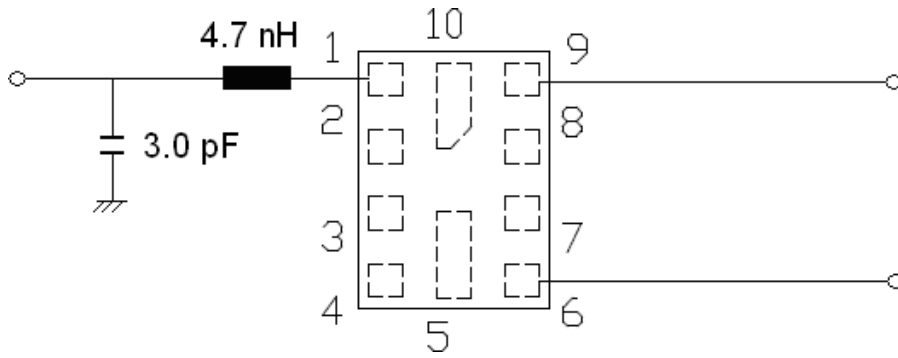
Terminating load impedance (single) : $Z_L = 50 \Omega$

| Item (L5 Band to Antenna) | Unit | Min. | Typ. | Max. |
|--|-------|------|---------|------|
| Center frequency | MHz | - | 1176.45 | - |
| Insertion Loss (1166.22 ~ 1186.68 MHz) | dB | - | 2.0 | 3.5 |
| VSWR (1166.22 ~ 1186.68 MHz) | - | - | 2.4 | 2.8 |
| Attenuation (reference level from 0 dB) | | | | |
| 850 ~ 980 MHz | dB | 30 | 42 | - |
| 980 ~ 1010 MHz | dB | 30 | 40 | - |
| 1010 ~ 1100 MHz | dB | 30 | 38 | - |
| 1100 ~ 1130 MHz | dB | 30 | 36 | - |
| 1220 ~ 1250 MHz | dB | 20 | 30 | - |
| 1260 ~ 1427 MHz | dB | 28 | 35 | - |
| Temperature Coefficient of Frequency | ppm/K | - | -36 | - |

| Item (L1 Band + GLONASS to Antenna) | Unit | Min. | Typ. | Max. |
|--|-------|------|---------|------|
| Center frequency | MHz | - | 1585.47 | - |
| Insertion Loss (1559.05 ~ 1611.89 MHz) | dB | - | 2.5 | 3.5 |
| VSWR (1559.05 ~ 1611.89 MHz) | - | | 2.3 | 2.8 |
| Attenuation (reference level from 0 dB) | | | | |
| 10 ~ 960 MHz | dB | 35 | 45 | - |
| 960 ~ 1463 MHz | dB | 35 | 45 | - |
| 1710 ~ 1785 MHz | dB | 30 | 35 | - |
| 1785 ~ 1990 MHz | dB | 33 | 38 | - |
| 1990 ~ 2280 MHz | dB | 35 | 45 | - |
| 2280 ~ 3000 MHz | dB | 30 | 50 | |
| 3000 ~ 6000 MHz | dB | 30 | 50 | |
| Temperature Coefficient of Frequency | ppm/K | - | -36 | - |

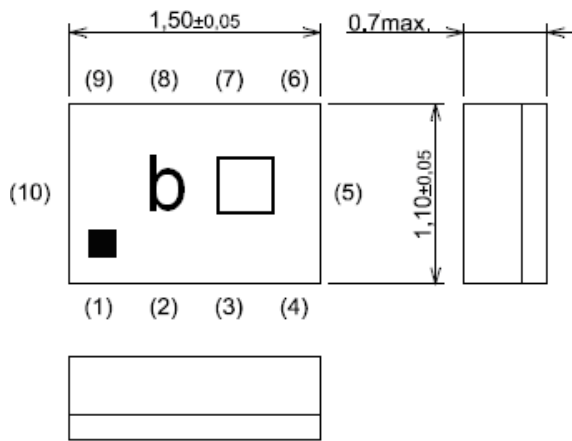
| Item (Isolation) | Unit | Min. | Typ. | Max. |
|--|------|------|------|------|
| Attenuation (reference level from 0 dB) | | | | |
| 1166.22 ~ 1186.68 MHz | dB | 35 | 44 | - |
| 1559.05 ~ 1605.89 MHz | dB | 35 | 38 | - |

C. TEST CIRCUIT:

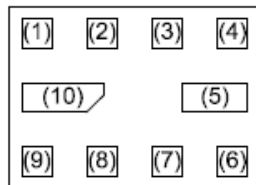


| Pin # | Function |
|-------|----------|
| (1) | Antenna |
| (2) | Ground |
| (3) | Ground |
| (4) | Ground |
| (5) | Ground |
| (6) | L5 Band |
| (7) | Ground |
| (8) | Ground |
| (9) | L1 Band |
| (10) | Ground |

D. OUTLINE DRAWING:



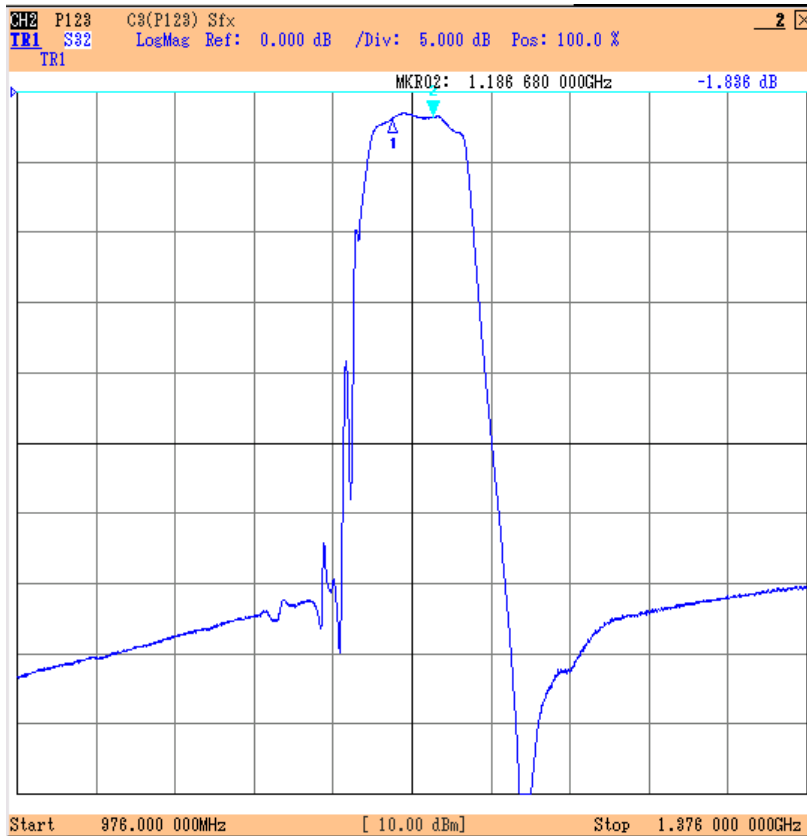
| Pin # | Function |
|-------|----------|
| (1) | Antenna |
| (2) | Ground |
| (3) | Ground |
| (4) | Ground |
| (5) | Ground |
| (6) | L5 Band |
| (7) | Ground |
| (8) | Ground |
| (9) | L1 Band |
| (10) | Ground |



| Year/Month | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------|---|---|---|---|---|---|---|---|---|----|----|----|
| 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 |
| 2020 | n | p | q | r | s | t | u | v | w | x | y | z |
| 2021 | A | B | C | D | E | F | G | H | J | K | L | M |
| 2022 | N | P | Q | R | S | T | U | V | W | X | Y | Z |
| 2023 | a | b | c | d | e | f | g | h | j | k | l | m |
| 2024 | n | p | q | r | s | t | u | v | w | x | y | z |

E. Frequency Characteristics:

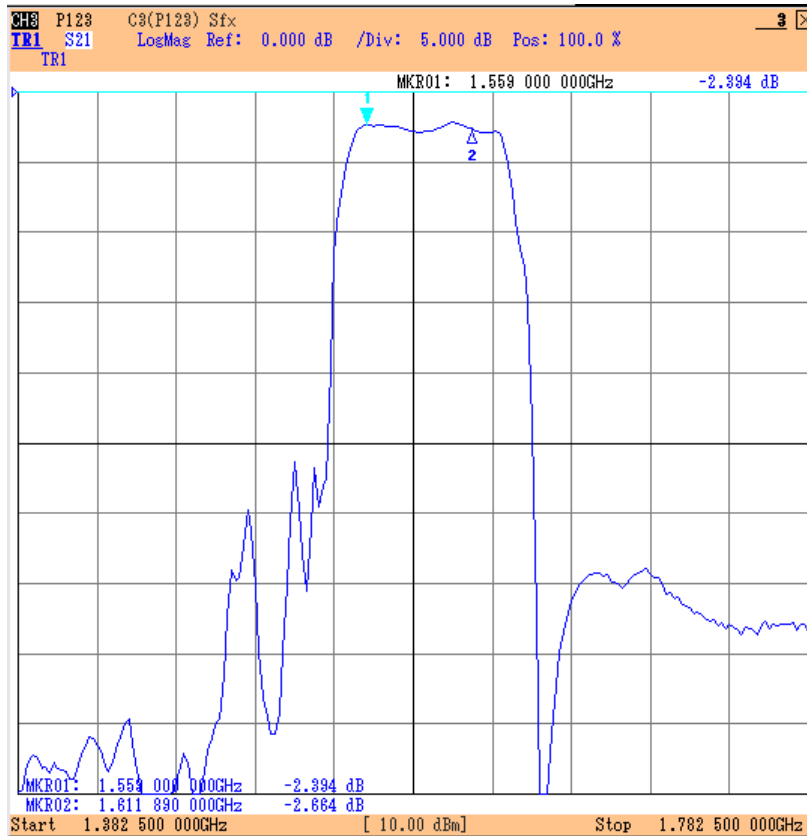
L5 Pass Band



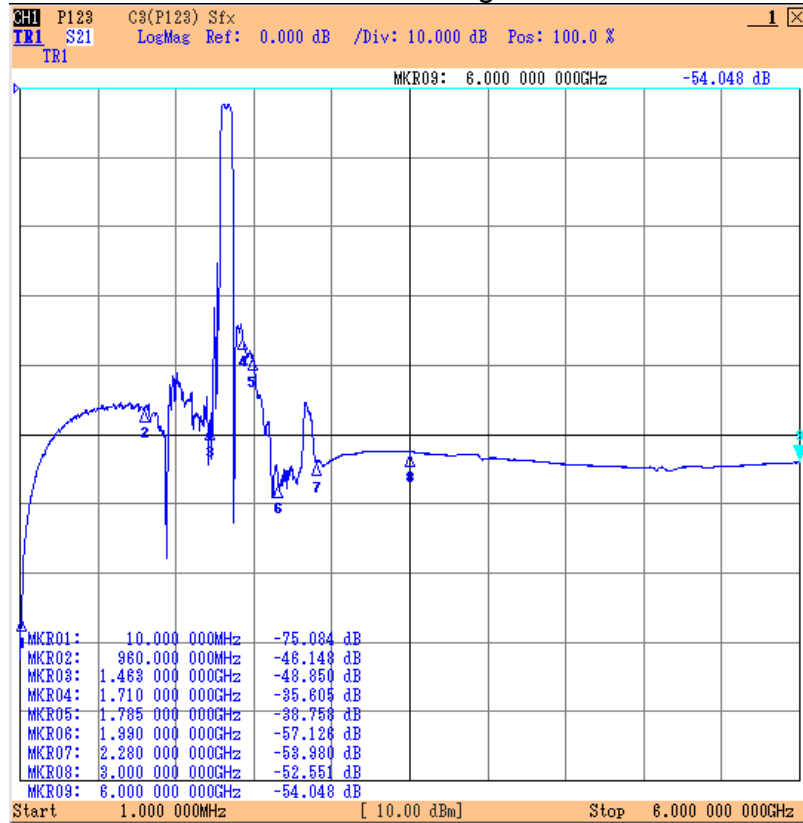
L5 Full Range



L1 Pass Band



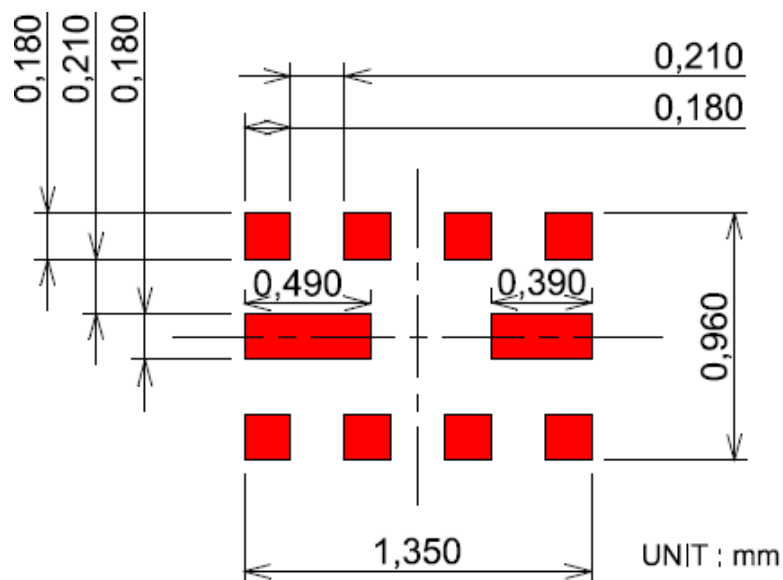
L1 Full Range



Isolation



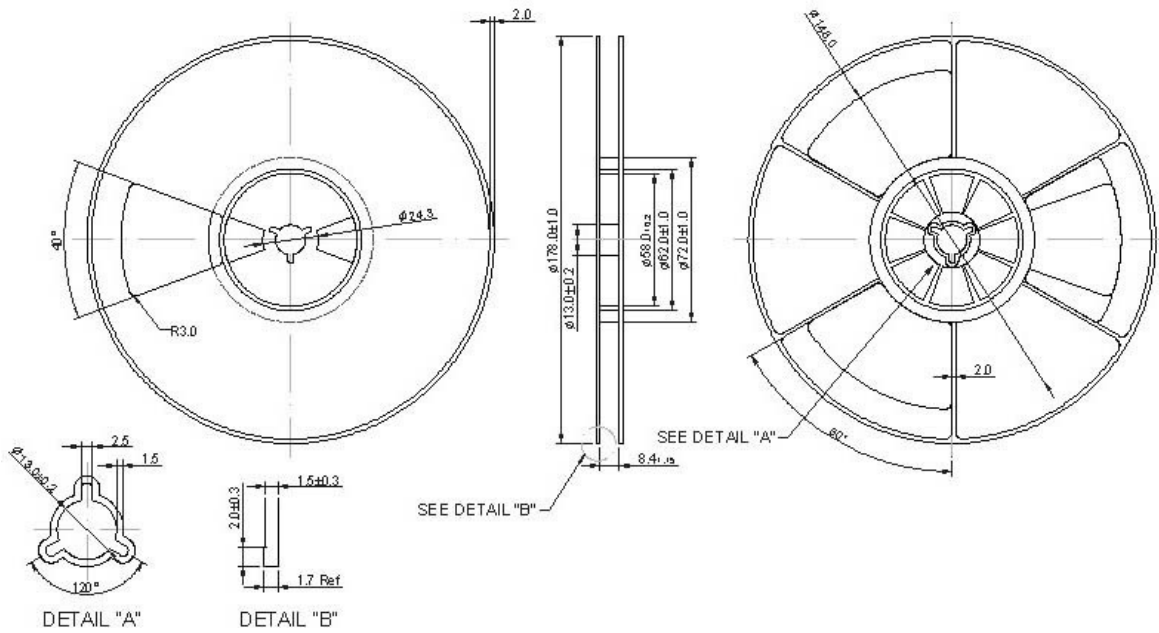
F. PCB FOOTPRINT:



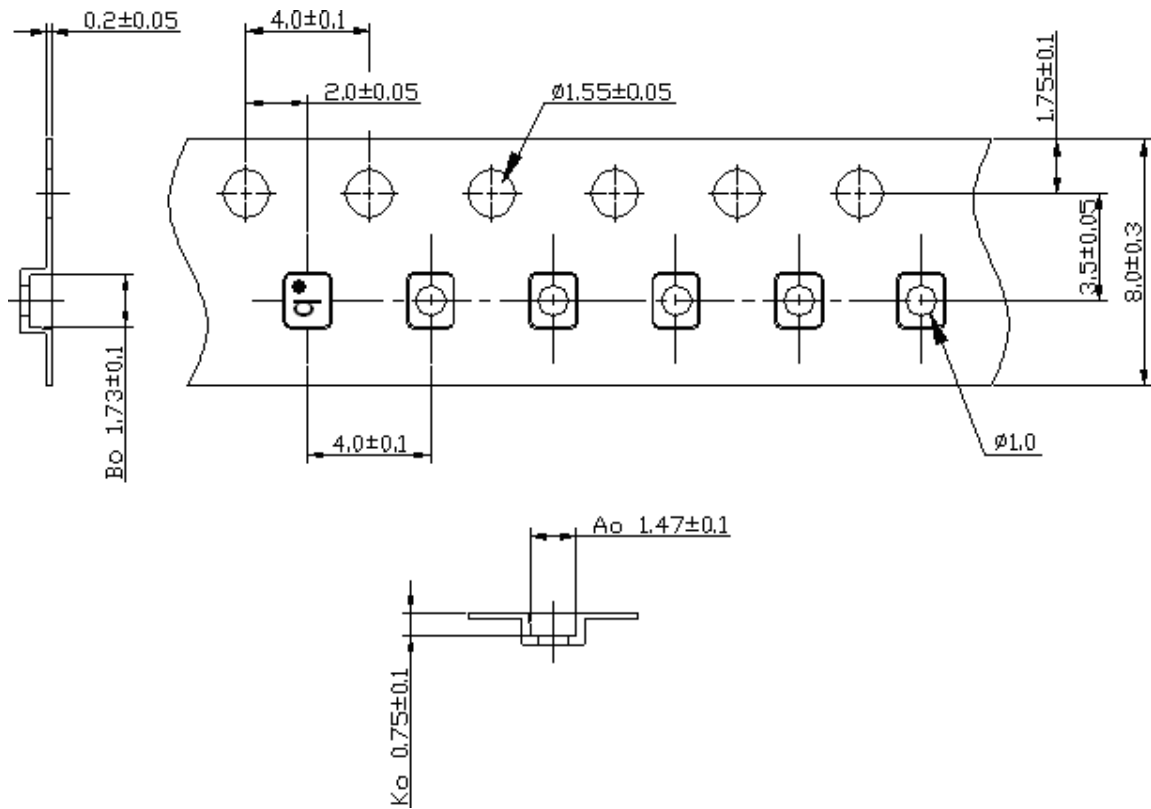
G. PACKING:

Reel count:
7" = 3000

1. REEL DIMENSION



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.

