# Datasheet of SAW Device

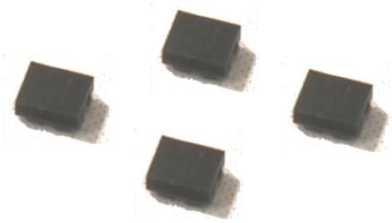
## SAW Dual Filter

for B38/40 / 2in2out Balanced / HL /1511

Murata PN: SAWFD2G35BJ0F0A

## ■ Feature

- Output Diplex Type Dual SAW



Note : Murata SAW Component is applicable for Cellular /Cordless phone (Terminal) relevant market only.
Please also read caution at the end of this document.

# SAWFD2G35BJ0F0A ( B38/40 / 2in2out Balanced / HL / 1511 )

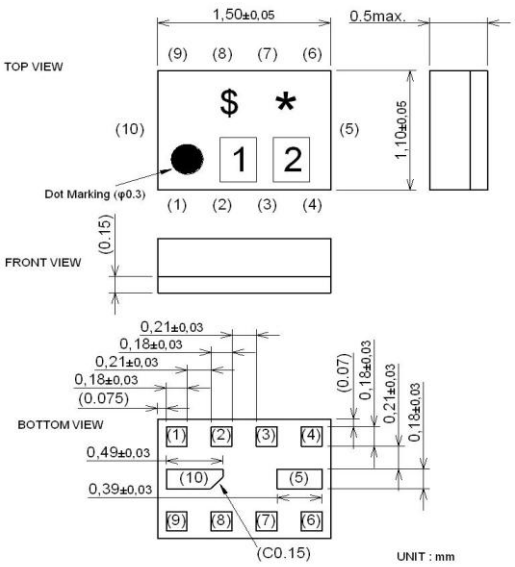
| Revision No. | Date | Discription |
|---|---|---|
| SAWFD2G35BJ0F0A_rev. A | Feb-27-2013 | ■ Initial Release |
| SAWFD2G35BJ0F0A_rev. B | Aug-22-2013 | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

- Operating temperature : -30 to +85 deg.C
- Storage temperature : -40 to +85 deg.C
- Input Power : +13 dBm 2000 h
- D.C. Volatage between the terminals : 3V (25+/-2 deg.C)
- Minimum Resistance betweem the terminals : 10M ohm
- RoHS compliance : Yes

# Package Dimensions & Recommended Land Pattern

unit: mm

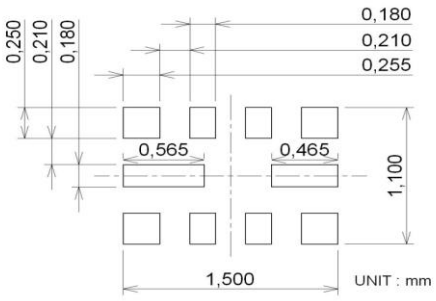
## Dimensions



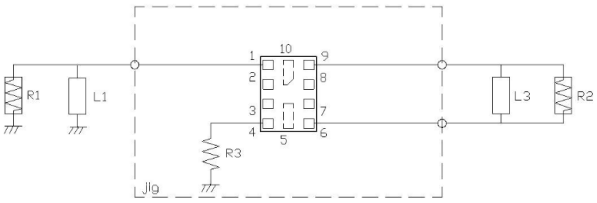

Marking : Laser Printing
* : Month code(Refer to the table A)
$ : Date code(Refer to the table B)
1 : Z
2 : 5

Terminal Number
(4) : Unbalance Port-Lch
(6)(9) : Balance Port
(1) : Unbalance Port-Hch
Others : Ground

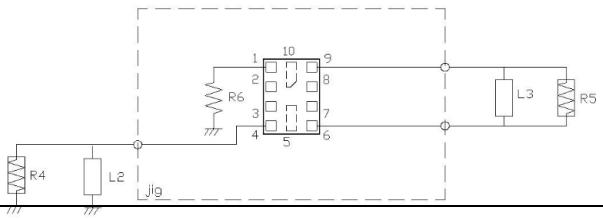
## Land Pattern




## Measurement Circuit (Top View)




(Hch)




(Lch)

R1 : 50 ohm L1 : 7.5 nH(Ideal inductor)
R2 : 100 ohm L2 : 7.5 nH(Ideal inductor)
R3 : 50 ohm L3 : 5.0 nH(Ideal inductor)
R4 : 50 ohm
R5 : 100 ohm
R6 : 50 ohm

# SAWFD2G35BJ0F0A ( B38/40 / 2in2out Balanced / HL / 1511 )

## Electrical Characteristic < Low Freq. Filter >

### Matching Impedance (nominal)

- - : Unbalance Port-Lch : 50 ohm // 7.5 nH(Ideal inductor)
- - : Balance Port : 100 ohm // 5.0 nH(Ideal inductor)

| Low Freq. Filter | | | | Characteristics ( -30 to +85 deg.C ) | | | Unit | Note |
|---|---|---|---|---|---|---|---|---|
| | | | | min. | typ. | max. | | |
| Center Frequency | | | | | 2350 | | MHz | |
| Insertion Loss | 2300. | to | 2400. MHz | | 3.2 | 4.7 | dB | |
| | 2300. | to | 2400. MHz | | 3.2 | 3.5 | dB | +23 to +27deg.C |
| Ripple Deviation | 2300. | to | 2400. MHz | | 1.1 | 3.0 | dB | |
| VSWR | 2300. | to | 2400. MHz | | 2.0 | 2.9 | | |
| | 2300. | to | 2400. MHz | | 2.0 | 2.2 | | +23 to +27deg.C |
| Amplitude Balance | 2300. | to | 2400. MHz | -2.5 | 1.9 | 2.5 | dB | |
| Phase Balance | 2300. | to | 2400. MHz | 158 | 197 | 202 | deg. | |
| Absolute Attenuation | 10. | to | 2215. MHz | 18 | 28 | | dB | |
| | 880. | to | 915. MHz | 50 | 60 | | dB | |
| | 1710. | to | 1785. MHz | 37 | 52 | | dB | |
| | 1880. | to | 1920. MHz | 38 | 48 | | dB | |
| | 2010. | to | 2025. MHz | 37 | 47 | | dB | |
| | 2215. | to | 2240. MHz | 10 | 23 | | dB | |
| | 2420. | to | 2430. MHz | 3.5 | 9 | | dB | |
| | 2430. | to | 2472. MHz | 6 | 30 | | dB | |
| | 2430. | to | 2472. MHz | 12 | 30 | | dB | +23 to +27deg.C |
| | 2472. | to | 2483. MHz | 20 | 30 | | dB | |
| | 2483. | to | 2500. MHz | 20 | 30 | | dB | |
| | 2500. | to | 3000. MHz | 22 | 32 | | dB | |
| | 3000. | to | 6000. MHz | 24 | 34 | | dB | |

* Typical value at 25±2deg.C

# SAWFD2G35BJ0F0A ( B38/40 / 2in2out Balanced / HL / 1511 )

## Electrical Characteristic < High Freq. Filter >

### Matching Impedance (nominal)

- - : Unbalance Port-Hch : 50 ohm // 7.5 nH(Ideal inductor)
- - : Balance Port : 100 ohm // 5.0 nH(Ideal inductor)

| High Freq. Filter | | | | Characteristics ( -30 to +85 deg.C ) | | | Unit | Note |
|---|---|---|---|---|---|---|---|---|
| | | | | min. | typ. | max. | | |
| Center Frequency | | | | | 2595 | | MHz | |
| Insertion Loss | 2570. | to | 2620. MHz | | 3.2 | 3.8 | dB | |
| | 2570. | to | 2620. MHz | | 3.2 | 3.5 | dB | +23 to +27deg.C |
| Ripple Deviation | 2570. | to | 2620. MHz | | 0.8 | 2 | dB | |
| VSWR | 2570. | to | 2620. MHz | | 1.4 | 2.2 | | |
| Amplitude Balance | 2570. | to | 2620. MHz | -2 | 1.2 | 2 | dB | |
| Phase Balance | 2570. | to | 2620. MHz | 164 | 193 | 196 | deg. | |
| Absolute Attenuation | 0.1 | to | 2400. MHz | 21 | 38 | | dB | |
| | 880. | to | 915. MHz | 50 | 66 | | dB | |
| | 1710. | to | 1785. MHz | 37 | 47 | | dB | |
| | 1880. | to | 1920. MHz | 33 | 44 | | dB | |
| | 2010. | to | 2025. MHz | 21 | 42 | | dB | |
| | 2400. | to | 2500. MHz | 22 | 32 | | dB | |
| | 2500. | to | 2562. MHz | 3 | 3.9 | | dB | |
| | 2700. | to | 3000. MHz | 17 | 27 | | dB | |
| | 3000. | to | 6000. MHz | 25 | 35 | | dB | |

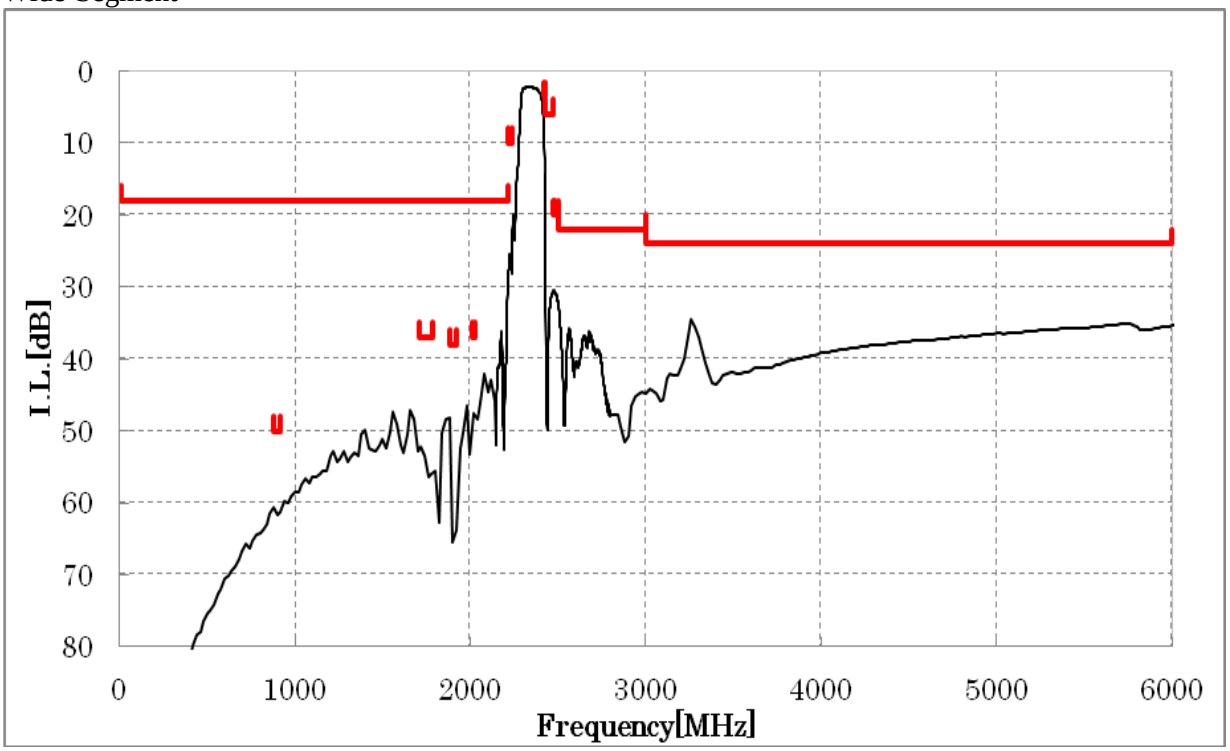
* Typical value at 25±2deg.C

# Electrical Characteristic

< Low Freq. Filter >

Narrow-Segment

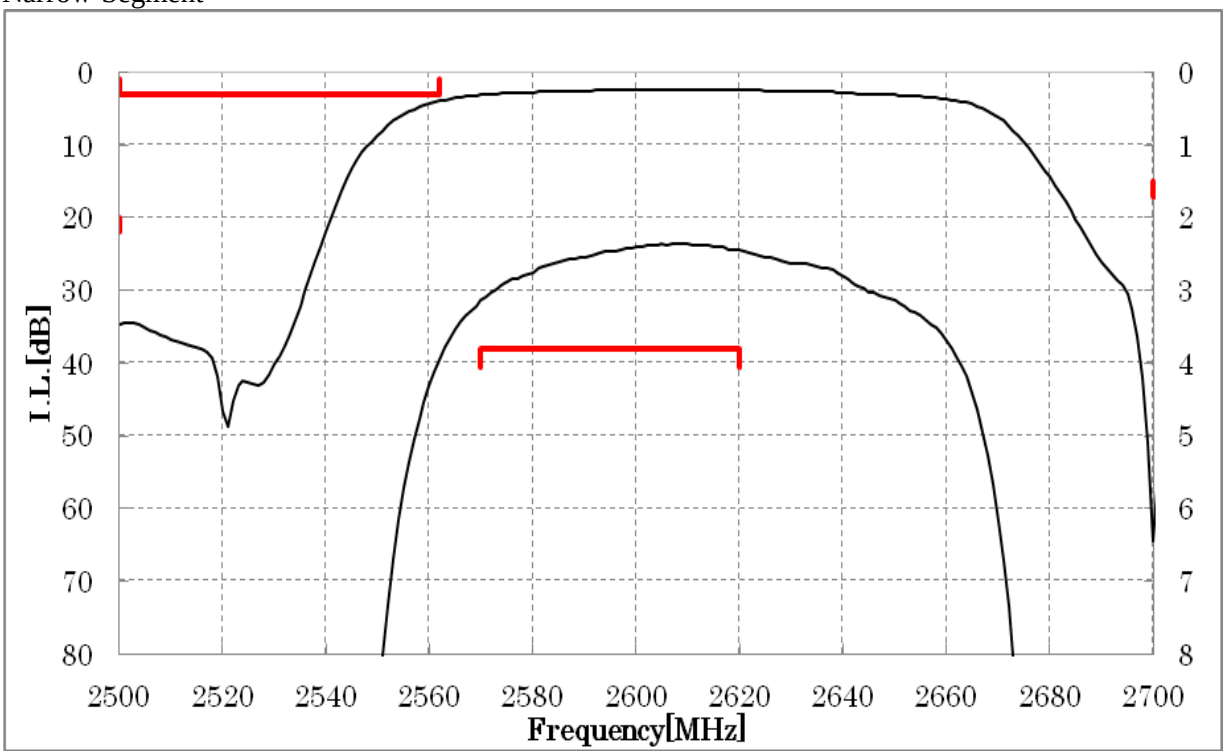

Wide-Segment



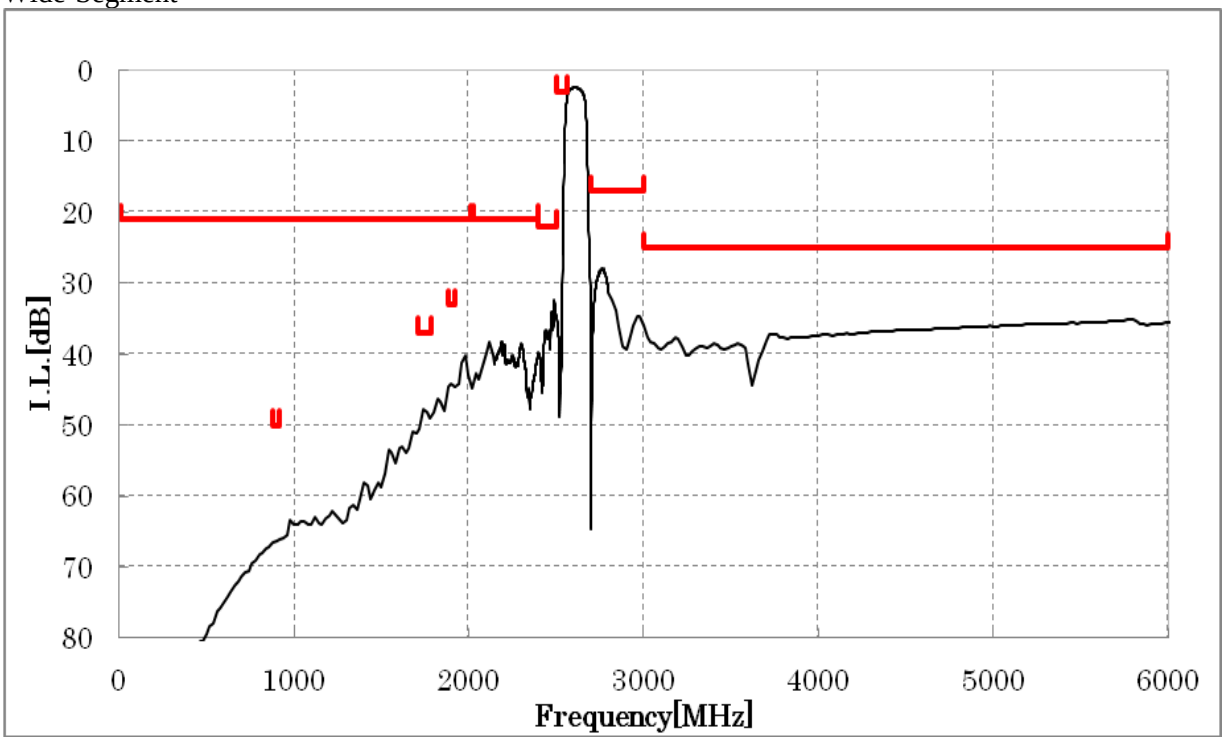
## Electrical Characteristic

< High Freq. Filter >

Narrow-Segment



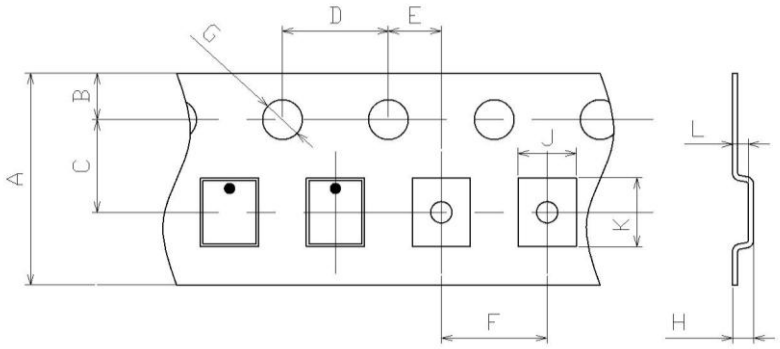

Wide-Segment



# Dimensions of Tape & Reel

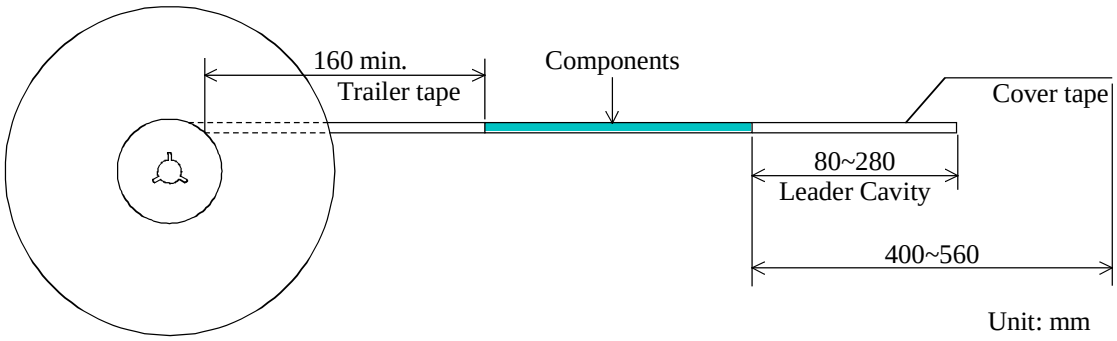
unit: mm

## Carrier Tape

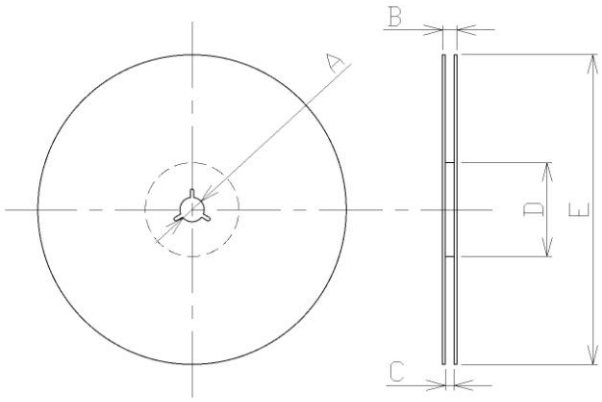



| | | | |
|---|---|---|---|
| A: | 8.0 | J: | 1.3 |
| B: | 1.75 | K: | 1.7 |
| C: | 3.50 | L: | 0.60 |
| D: | 4.0 | | |
| E: | 2.00 | | |
| F: | 4.0 | | |
| G: | φ1.5 | | |
| H: | 0.90 | | |

## Tape




## Reel




| φ178Reel | | φ330Reel | |
|---|---|---|---|
| A: | φ13.0 | A: | φ13.0 |
| B: | 13.5max | B: | 15.5max |
| C: | 9.0 | C: | 9.5 |
| D: | φ60 | D: | φ100 |
| E: | φ178 | E: | φ330 |

SAWFD2G35BJ0F0AR00… 10000pcs (φ330)
SAWFD2G35BJ0F0AR15… 5000pcs (φ178)
SAWFD2G35BJ0F0AR1S… sample Order (φ178)

## Marking Code

### Table A: Month Code

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2009<br>2013<br>2017 | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
| | A | B | C | D | E | F | G | H | J | K | L | M |
| 2010<br>2014<br>2018 | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
| | N | P | Q | R | S | T | U | V | W | X | Y | Z |
| 2011<br>2015<br>2019 | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
| | a | b | c̄ | d | e | f | g | h | j | k | l | m |
| 2012<br>2016<br>2020 | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
| | n | p | q | r | s | t | u | v | w | x | y | z |

### Table B: Date Code

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| date | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th |
| code | A | B | C | D | E | F | G | H | J | K |
| date | 11th | 12th | 13th | 14th | 15th | 16th | 17th | 18th | 19th | 20th |
| code | L | M | N | P | Q | R | S | T | U | V |
| date | 21st | 22nd | 23rd | 24th | 25th | 26th | 27th | 28th | 29th | 30th | 31st |
| code | W | X | Y | Z | a | b | c̄ | d | e | f | g |

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- Undersea equipment.
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- Traffic signal equipment.
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- Burning / explosion control equipment
- Application of similar complexity and/ or reliability requirements to the applications listed in the above.

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