



**THE DATASHEET OF  
FAR-F6QA-1G5754-H2JC-J**



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REFLOW

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## EXTERNAL DIMENSIONS/STANDARD QUANTITY



▶ This catalog contains the typical specification only due to the limitation of space. When you consider the purchase of our products, please check our specification. For details of each product (characteristics graph, reliability information, precautions for use, and so on), see our Web site (<http://www.ty-top.com/>).

## PART NUMBERS

### Duplexers

| System             | Part number           | Package Size (mm) | Insertion Loss (dB) | Isolation (dB) | Remarks  |
|--------------------|-----------------------|-------------------|---------------------|----------------|--|
| W-CDMA Band 1      | D6PE2G140P3AW         | 2.0×1.6×0.5       | 1.5/1.6             | 59/47          | 9 Pin, B Type Rx : Bal.100ohm                          |
|                    | D6RB2G140E1AJ         | 1.8×1.4×0.5       | 1.7/1.8             | 57/48          | 8 Pin, B Type Rx : Bal.100ohm                          |
| PCS/W-CDMA Band 2  | FAR-D6NH-1G9600-M1Z9  | 2.5×2.0×0.65      | 2.2/3.1             | 55/50          | 9 Pin, B Type  |
|                    | FAR-D6NH-1G9600-M1Z6  | 2.5×2.0×0.65      | 2.3/2.7             | 55/53          | 9 Pin, B Type Low Rx IL                                |
|                    | FAR-D6NF-1G9600-P1BT  | 2.5×2.0×0.65      | 2.5/2.8             | 54/55          | 9 Pin, B Type 100ohm, Low Rx IL                        |
|                    | D6NF1G960P1BR         | 2.5×2.0×0.65      | 2.5/3.4             | 58/53          | 9 Pin, B Type Rx : Bal.100ohm High GPS Att. & Rx Isol. |
|                    | D6HH1G960BH95         | 2.5×2.0×0.65      | 2.3/2.5             | 56/53          | 9 Pin, B Type 100ohm                                   |
|                    | D6PE1G960P3BY         | 2.0×1.6×0.57      | 2.0/3.1             | 57/53          | 9 Pin, B Type Rx : Bal.100ohm                          |
| W-CDMA Band 4      | D6PE2G132P3DWB        | 2.0×1.6×0.5       | 1.8/1.8             | 55/50          | 9 Pin, B Type Rx : Bal.100ohm                          |
|                    | FAR-D5NG-881M50-M11Z  | 2.5×2.0×0.6       | 1.45/1.8            | 66/52          | 9 Pin, B Type  |
|                    | FAR-D5PF-881M50-M3E9  | 2.0×1.6×0.5       | 1.5/1.8             | 58/51          | 9 Pin, B Type  |
| CDMA/W-CDMA Band 5 | FAR-D5NE-881M50-P1A9  | 2.5×2.0×0.6       | 1.6/1.8             | 57/51          | 9 Pin, B Type Rx : Bal.100ohm                          |
|                    | FAR-D5NE-881M50-P1A6Q | 2.5×2.0×0.6       | 1.6/1.7             | 60/53          | 9 Pin, B Type 100ohm                                   |
|                    | FAR-D5PE-881M50-P3EZ  | 2.0×1.6×0.5       | 1.4/1.7             | 59/52          | 9 Pin, B Type Rx : Bal.100ohm                          |
|                    | FAR-D5PE-881M50-P3EY  | 2.0×1.6×0.5       | 1.4/1.7             | 59/52          | 9 Pin, A Type Rx : Bal.100ohm                          |
|                    | D5NL881M5P1HY         | 3.0×2.5×0.7       | 1.6/2.6             | 60/51          | SV-LTE   |
|                    | FAR-D5NH-942M50-M1Y9  | 2.5×2.0×0.65      | 1.8/2.3             | 58/50          | 9 Pin, B Type  |
| W-CDMA Band 8      | FAR-D5NF-942M50-P1GWQ | 2.5×2.0×0.65      | 1.9/2.3             | 59/54          | 9 Pin, B Type 100ohm, GPS High Att.                    |
|                    | D5PF942M5M3G9         | 2.0×1.6×0.5       | 1.9/2.2             | 60/52          | 9 Pin, B Type  |
|                    | D5PE942M5P3GT         | 2.0×1.6×0.5       | 1.7/2.2             | 58/54          | 9 Pin, B Type Rx : Bal.100ohm                          |
|                    | D5PE782M0M3P9         | 2.0×1.6×0.5       | 1.6/2.0             | 53/64          | 9 Pin, B Type  |
| LTE Band 13        | D5NL782M0P1JZ         | 3.0×2.5×0.7       | 1.9/2.2             | 66/52          | SV-LTE   |
|                    | FAR-D5NE-740M00-P1C9  | 2.5×2.0×0.6       | 1.7/2.0             | 61/58          | 9 Pin, B Type Rx : Bal.100ohm                          |
| LTE Band 17        | D5PE740M0P3NZ         | 2.0×1.6×0.5       | 1.9/2.0             | 63/60          | 9 Pin, B Type Rx : Bal.100ohm                          |
| LTE Band 20        | D5NE847M0P1K9         | 2.5×2.0×0.6       | 2.1/2.3             | 52/51          | 9 Pin, B Type Rx : Bal.100ohm                          |
| LTE Band 21        | D6PE1G503P3KW         | 2.0×1.6×0.5       | 1.6/2.0             | 55/56          | 9 Pin, B Type Rx : Bal.100ohm                          |
| LTE Band 26        | D5PE876M5P3UZ         | 2.0×1.6×0.5       | 2.2/2.6             | 60/49          | 9 Pin, B Type Rx : Bal.100ohm                          |
| LTE Band 28        | D5PF773M0M3Y6         | 2.0×1.6×0.5       | 1.8/2.3             | 60/53          | Block A 9Pin, B Type                                   |
|                    | D5PF788M0M3Y9         | 2.0×1.6×0.5       | 1.8/2.4             | 60/54          | Block B 9Pin, B Type                                   |
| CDMA BC0+BC10      | D5NF878M0P1ET         | 2.5×2.0×0.65      | 1.9/2.5             | 58/50          | 9 Pin, B Type Rx : Bal.100ohm                          |
|                    | D5PE878M0P3UT         | 2.0×1.6×0.5       | 1.9/2.2             | 59/51          | 9 Pin, B Type Rx : Bal.100ohm                          |

### CDMA/GSM850/Band 5

| System                | Part number          | Package Size (mm) | Insertion Loss (dB) | Attenuation (dB) | Remarks                     |
|-----------------------|----------------------|-------------------|---------------------|------------------|-----------------------------|
| CDMA Tx               | FAR-F5KB-836M50-B4ER | 1.4×1.0×0.5       | 1.7                 | 44               | 100ohm input                |
|                       | FAR-F5KB-836M50-B4EG | 1.4×1.0×0.5       | 1.6                 | 42               | 200ohm input                |
|                       | F5QA836M5M2AR        | 1.1×0.9×0.5       | 1.9                 | 45               | High Att.                   |
| CDMA/GSM850 Tx        | FAR-F5KA-836M50-D4DF | 1.4×1.0×0.5       | 1.9                 | 44               | High Att.                   |
|                       | FAR-F5KB-881M50-B4ED | 1.4×1.0×0.5       | 1.5                 | 61               | 100ohm output               |
| CDMA/W-CDMA Band 5 Rx | FAR-F5KY-881M50-B4UZ | 1.4×1.0×0.5       | 1.5                 | 61               | 100ohm, High Att.           |
|                       | FAR-F5KB-881M50-B4EJ | 1.4×1.0×0.5       | 1.4                 | 64               | 200ohm output               |
|                       | FAR-F5QB-881M50-P2BG | 1.1×0.9×0.5       | 1.5                 | 60               | 100ohm output               |
|                       | F5QG881M5P2KG        | 1.1×0.9×0.5       | 1.5                 | 56               | 100ohm, High Att., Low Loss |
|                       | FAR-F5KA-881M50-D4DB | 1.4×1.0×0.5       | 1.7                 | 56               | High Att.                   |
| GSM850/CDMA Rx        | FAR-F5QA-881M50-M2AF | 1.1×0.9×0.5       | 1.6                 | 46               | -                           |
|                       | FAR-F5KB-881M50-B4EA | 1.4×1.0×0.5       | 1.7                 | 53               | 150ohm output               |
| GSM850 Rx             | FAR-F5QB-881M50-P2BA | 1.1×0.9×0.5       | 1.3                 | 63               | 150ohm output               |

### CDMA2000 BC0+BC10

| System             | Part number   | Package Size (mm) | Insertion Loss (dB) | Attenuation (dB) | Remarks       |
|--------------------|---------------|-------------------|---------------------|------------------|---------------|
| CDMA2000 BC0+10 Tx | F5KA833M0D4DU | 1.4×1.0×0.5       | 2.3                 | 43               | High Att.     |
|                    | F5KA833M0D4MG | 1.4×1.0×0.5       | 1.4                 | 20               | Low IL        |
| CDMA2000 BC0+10 Rx | F5KY878M0B4ND | 1.4×1.0×0.5       | 2.1                 | 53               | 100ohm output |

### GSM/EGSM/Band 8

| System            | Part number          | Package Size (mm) | Insertion Loss (dB) | Attenuation (dB) | Remarks           |
|-------------------|----------------------|-------------------|---------------------|------------------|-------------------|
| EGSM Tx           | FAR-F5KA-897M50-D4DC | 1.4×1.0×0.5       | 2.2                 | 16               | High Att.         |
|                   | FAR-F5KA-897M50-D4VW | 1.4×1.0×0.5       | 2.6                 | 38               | High Att.         |
|                   | F5QA897M5M2AC        | 1.1×0.9×0.5       | 2.3                 | 18               | -                 |
| EGSM Rx           | FAR-F5KA-942M50-D4DD | 1.4×1.0×0.5       | 2.0                 | 34               | High Att.         |
|                   | FAR-F5KB-942M50-B4EB | 1.4×1.0×0.5       | 1.6                 | 26               | 150ohm output     |
|                   | FAR-F5KB-942M50-B4ES | 1.4×1.0×0.5       | 2.4                 | 29               | 100ohm output     |
|                   | FAR-F5QB-942M50-P2BB | 1.1×0.9×0.5       | 1.6                 | 28               | 150ohm output     |
|                   | F5KA942M5D4MYB       | 1.4×1.0×0.5       | 1.9                 | 53               | High Att.         |
| W-CDMA/LTE Band 8 | FAR-F5KY-942M50-B4UW | 1.4×1.0×0.5       | 2.0                 | 57               | 100ohm, High Att. |
|                   | F5QG942M5P2KB        | 1.1×0.9×0.5       | 2.2                 | 56               | 100ohm, High Att. |

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## PART NUMBERS

### DCS/Band 3

| System            | Part number          | Package Size (mm) | Insertion Loss (dB) | Attenuation (dB) | Remarks           |
|-------------------|----------------------|-------------------|---------------------|------------------|-------------------|
| DCS Tx            | FAR-F6KA-1G7475-D4CY | 1.4×1.0×0.5       | 2.5                 | 30               |                   |
|                   | F6QA1G747M2QS        | 1.1×0.9×0.5       | 2.1                 | 22               |                   |
| DCS Rx            | FAR-F6KA-1G8425-D4CK | 1.4×1.0×0.5       | 2.1                 | 20               |                   |
|                   | FAR-F6KB-1G8425-B4GA | 1.4×1.0×0.5       | 1.5                 | 14               | 150ohm output     |
|                   | F6QB1G842P2BM        | 1.1×0.9×0.5       | 1.8                 | 15               | 100ohm            |
|                   | F6QB1G842P2BF        | 1.1×0.9×0.5       | 1.6                 | 17               | 150ohm            |
| W-CDMA/LTE Band 3 | F6KY1G842B4UM        | 1.4×1.0×0.5       | 3.0                 | 50               | 100ohm, High Att. |

### PCS/GSM1900/Band 2

| System            | Part number          | Package Size (mm) | Insertion Loss (dB) | Attenuation (dB) | Remarks           |
|-------------------|----------------------|-------------------|---------------------|------------------|-------------------|
| US-PCS Tx         | FAR-F6KA-1G8800-L4AF | 1.4×1.0×0.5       | 2.4                 | 35               | High Att.         |
|                   | FAR-F6KB-1G8800-B4GS | 1.4×1.0×0.5       | 2.3                 | 28               | 100ohm input      |
|                   | F6QA1G880M2AQ        | 1.1×0.9×0.5       | 1.7                 | 20               |                   |
| US-PCS Rx         | FAR-F6KA-1G9600-D4MT | 1.4×1.0×0.5       | 3.4                 | 43               | High Att.         |
|                   | FAR-F6KB-1G9600-B4GP | 1.4×1.0×0.5       | 2.1                 | 23               | 100ohm output     |
|                   | FAR-F6KY-1G9600-B4UU | 1.4×1.0×0.5       | 2.9                 | 49               | 100ohm, High Att. |
|                   | F6KY1G960B4NF        | 1.4×1.0×0.5       | 2.8                 | 50               | 100ohm output     |
|                   | F6QG1G960P2KT        | 1.1×0.9×0.5       | 2.8                 | 44               | 100ohm output     |
| GSM1900/US-PCS Rx | FAR-F6KA-1G9600-D4CR | 1.4×1.0×0.5       | 2.0                 | 18               |                   |
| GSM1900 Rx        | FAR-F6KB-1G9600-B4GB | 1.4×1.0×0.5       | 1.6                 | 18               | 150ohm output     |
|                   | F6QB1G960P2BK        | 1.1×0.9×0.5       | 1.5                 | 15               | 150ohm output     |

### GSM Dual

| System                         | Part number          | Package Size (mm) | Insertion Loss (dB) | Attenuation (dB) | Remarks                                    |
|--------------------------------|----------------------|-------------------|---------------------|------------------|--|
| GSM850+EGSM Rx                 | FAR-G5QC-942M50-N2FB | 1.5×1.1×0.5       | 1.5/1.8             | 50/29            | GSM850 150ohm output EGSM 150ohm output    |
| GSM850+EGSM Rx (Common Input)  | FAR-G5KT-942M50-Y4RW | 1.8×1.4×0.5       | 1.9/2.2             | 50/25            | GSM850 150ohm output EGSM 150ohm output    |
| GSM850+EGSM Rx (Common Output) | FAR-G5KW-942M50-Y4YD | 1.8×1.4×0.5       | 2.5/1.8             | 32/38            | EGSM 150ohm output GSM850 150ohm output    |
| EGSM+GSM850 Rx                 | FAR-G5KC-942M50-Y4YW | 1.8×1.4×0.5       | 1.8/1.4             | 31/54            | EGSM 150ohm output GSM850 150ohm output    |
|                                | FAR-G5QC-942M50-N2CD | 1.5×1.1×0.5       | 1.7/1.4             | 29/51            | EGSM 150ohm output GSM850 150ohm output    |
| EGSM+GSM850 Rx (Common Input)  | FAR-G5KT-942M50-Y4RZ | 1.8×1.4×0.5       | 2.2/1.9             | 25/52            | EGSM 150ohm output GSM850 150ohm output    |
|                                | FAR-G5QD-942M50-N2DB | 1.5×1.1×0.5       | 2.5/2.0             | 25/55            | EGSM 150ohm output GSM850 150ohm output    |
| DCS+GSM1900 Rx                 | FAR-G6QC-1G9600-N2FA | 1.5×1.1×0.5       | 1.9/1.7             | 17/13            | DCS 150ohm output GSM1900 150ohm output    |
|                                | G6QJ1G960M2MB        | 1.5×1.1×0.5       | 1.9/1.9             | 19/19            | Rx Dual Unbal                              |
| DCS+GSM1900 Rx (Common Input)  | FAR-G6KT-1G9600-Y4RU | 1.8×1.4×0.5       | 1.8/2.0             | 18/13            | DCS 150ohm output GSM1900 150ohm output    |
| DCS+GSM1900 Rx (Common Output) | G6QD1G960N2DY        | 1.5×1.1×0.5       | 1.8/1.9             | 18/14            | 1 IN 4 OUT 150ohm output                   |
| GSM1900+DCS Rx                 | FAR-G6KC-1G9600-Y4YY | 1.8×1.4×0.5       | 1.9/1.8             | 14/16            | GSM1900 150ohm output DCS 150ohm output    |
|                                | G6QC1G960N2CH        | 1.5×1.1×0.5       | 1.6/1.6             | 13/15            | GSM1900 150ohm output DCS 150ohm output    |
| GSM1900+DCS Rx (Common Input)  | FAR-G6KT-1G9600-Y4RY | 1.8×1.4×0.5       | 1.9/1.8             | 13/18            | GSM1900 150ohm output DCS 150ohm output    |
| GSM1900+DCS Rx (Common Output) | FAR-G6KW-1G9600-Y4YC | 1.8×1.4×0.5       | 2.2/3.1             | 13/15            | 170ohm output for IMC                      |
|                                | G6QE1G960N2EC        | 1.5×1.1×0.5       | 2.5/2.5             | 18/13            | GSM1900 150ohm output DCS 150ohm output    |
|                                | G6QE1G960N2EE        | 1.5×1.1×0.5       | 2.2/2.2             | 31/14            | GSM1900/DCS 150ohm output Low Loss         |
| GSM1900+850 Rx                 | G6QF1G960N2GA        | 1.5×1.1×0.5       | 1.6/1.4             | 14/54            | GSM1900 150ohm output GSM850 150ohm output |

### GPS

| System                       | Part number          | Package Size (mm) | Insertion Loss (dB) | Attenuation (dB) | Remarks             |
|------------------------------|----------------------|-------------------|---------------------|------------------|---------------------|
| GPS                          | FAR-F6KA-1G5754-L4AJ | 1.4×1.0×0.5       | 0.9                 | —                | Low loss, High Att. |
|                              | F6QA1G575H2JF        | 1.1×0.9×0.5       | 0.96                | —                | Low loss, High Att. |
|                              | FAR-F6KB-1G5754-B4GE | 1.4×1.0×0.5       | 1.1                 | —                | 100ohm, Low loss    |
|                              | FAR-F6KB-1G5754-B4GU | 1.4×1.0×0.5       | 1.2                 | —                | 100ohm, High Att.   |
| GPS/GNSS                     | FAR-F6KA-1G5859-D4MS | 1.4×1.0×0.5       | 1.0/1.2             | —                | —                   |
|                              | F6QA1G585M2AT        | 1.1×0.9×0.5       | 1.1/1.4             | —                | —                   |
|                              | FAR-F6KB-1G5859-B4HR | 1.4×1.0×0.5       | 1.1/1.4             | —                | 100ohm output       |
|                              | F6QB1G585P2BQ        | 1.1×0.9×0.5       | 1.5/1.7             | —                | 100ohm output       |
| GPS+GLONASS+Galileo +Compass | F6KA1G581D4JR        | 1.4×1.0×0.5       | 1.6                 | —                | —                   |
|                              | F6QA1G581M2QZ        | 1.1×0.9×0.5       | 1.1/1.4             | —                | —                   |

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**PART NUMBERS**

**W-CDMA**

| System                             | Part number          | Package Size (mm) | Insertion Loss (dB) | Attenuation (dB) | Remarks                             |
|------------------------------------|----------------------|-------------------|---------------------|------------------|-------------------------------------|
| W-CDMA Band 1 Tx                   | FAR-F6KA-1G9500-D4DG | 1.4×1.0×0.5       | 1.6                 | 38               | Low loss, High Att.                 |
|                                    | FAR-F6KB-1G9500-B4GJ | 1.4×1.0×0.5       | 2.1                 | 34               | 100ohm output                       |
|                                    | F6QA1G950M2AA        | 1.1×0.9×0.5       | 1.8                 | 38               | Low loss, High Att.                 |
| W-CDMA Band 1 Rx                   | FAR-F6KA-2G1400-D4CG | 1.4×1.0×0.5       | 1.9                 | 39               |                                     |
|                                    | FAR-F6KB-2G1400-B4GC | 1.4×1.0×0.5       | 1.7                 | 39               | 100ohm output                       |
|                                    | FAR-F6KA-2G1400-D4DW | 1.4×1.0×0.5       | 1.9                 | 48               | High Att.                           |
|                                    | FAR-F6KY-2G1400-B4UY | 1.4×1.0×0.5       | 1.8                 | 64               | 100ohm, High Att.                   |
|                                    | F6QG2G140P2KA        | 1.1×0.9×0.5       | 1.7                 | 55               | 100ohm, High Att.                   |
| W-CDMA Band 1+2 Rx                 | G6QL2G140M2PA        | 1.5×1.1×0.5       | 1.9/3.0             | 48/41            |                                     |
| W-CDMA Band 2+1 Rx                 | G6QH2G140N2LP        | 1.5×1.1×0.5       | 3.2/2.3             | 53/54            | 2 (1.9G)100ohm out 1 (2G)100ohm out |
| W-CDMA Band 4 Tx                   | FAR-F6KA-1G7400-D4DE | 1.4×1.0×0.5       | 1.5                 | 44               |                                     |
| W-CDMA Band 5+8 Rx                 | G5QH942M5N2LN        | 1.5×1.1×0.5       | 1.6/2.0             | 56/50            | 100ohm output                       |
| W-CDMA Band 8+5 Rx (Common Output) | G5QT942M5N2VA        | 1.5×1.1×0.5       | 2.3/2.0             | 48/48            | 100ohm output                       |
| W-CDMA Band 7 Tx                   | F6KA2G535L4AM        | 1.4×1.0×0.5       | 1.6                 | 30               |                                     |
| W-CDMA/LTE Band 7 Rx               | FAR-F6KY-2G6550-B4UN | 1.4×1.0×0.5       | 2.8                 | 54               | 100ohm. High Att.                   |
|                                    | F6QG2G655P2KE        | 1.1×0.9×0.5       | 2.5                 | 52               | 100ohm. High Att.                   |
| W-CDMA Band 9 Tx                   | FAR-F6KA-1G7675-D4CT | 1.4×1.0×0.5       | 1.8                 | 31               | Unbal.                              |
| W-CDMA Band 9 Rx                   | FAR-F6KB-1G8625-B4GT | 1.4×1.0×0.5       | 2.1                 | 40               | 100ohm output                       |
| LTE Band 12 Tx                     | F5KA707M5D4JW        | 1.4×1.0×0.5       | 1.6                 | 23               | Unbal.                              |
| LTE Band 12 Rx                     | F5KY737M0B4NN        | 1.4×1.0×0.5       | 1.4                 | 57               | 100ohm output                       |
| LTE Band 13 Tx                     | FAR-F5KA-782M00-D4VP | 1.4×1.0×0.5       | 1.5                 | 55               |                                     |
|                                    | F5QA782M0M2AZ        | 1.1×0.9×0.5       | 1.5                 | 56               | Unbal.                              |
| LTE Band 13 Rx                     | FAR-F5KY-751M00-B4UQ | 1.4×1.0×0.5       | 1.6                 | 50               | 100ohm output                       |
|                                    | F5QA751M0M2QM        | 1.1×0.9×0.5       | 1.9                 | 50               | Unbal.                              |
| LTE Band 17 Tx                     | FAR-F5KA-710M00-D4VQ | 1.4×1.0×0.5       | 1.2                 | 32               |                                     |
|                                    | F5QA710M0M2AY        | 1.1×0.9×0.5       | 1.3                 | 33               | Unbal.                              |
| LTE Band 17 Rx                     | FAR-F5KY-740M00-B4UR | 1.4×1.0×0.5       | 1.4                 | 60               | 100ohm output                       |
|                                    | F5QG740M0P2KH        | 1.1×0.9×0.5       | 1.4                 | 65               | 100ohm output                       |
| LTE Band 18 Tx                     | F5KA822M5D4VR        | 1.1×0.9×0.5       | 1.6                 | 40               | Unbal.                              |
| LTE Band 18+5 (BC0) Tx             | F5KA832M0D4JS        | 1.4×1.0×0.5       | 1.5                 | 19               | Unbal.                              |
| LTE Band 20 Tx                     | F5KA847M0D4ML        | 1.4×1.0×0.5       | 1.7                 | 52               |                                     |
| LTE Band 20 Rx                     | F5KY806M0B4NE        | 1.4×1.0×0.5       | 2.5                 | 45               | 100ohm output                       |
|                                    | F5QA806M0M2QE        | 1.1×0.9×0.5       | 2.7                 | 41               | Unbal.                              |
| LTE Band 21 Rx                     | F6KY1G503B4NS        | 1.4×1.0×0.5       | 1.4                 | 47               | 100ohm output Low loss              |
|                                    | F6QA1G503M2QF        | 1.1×0.9×0.5       | 2.0                 | 52               | Unbal.                              |
| LTE Band 25 Tx                     | F6QA1G882M2AS        | 1.1×0.9×0.5       | 1.8                 | 23               | Unbal.                              |
| LTE Band 26 Rx                     | F5QG876M5P2KQ        | 1.1×0.9×0.5       | 2.2                 | 59               | 100ohm output                       |
| LTE Band 28 Rx                     | F5QA773M0M2QC        | 1.1×0.9×0.5       | 2.1                 | 52               | Block A                             |
|                                    | F5QA788M0M2QB        | 1.1×0.9×0.5       | 2.0                 | 52               | Block B                             |
| LTE Band 29 Rx                     | F5BA722M5M6UW        | 1.1×0.9×0.5       | 1.6                 | 38               | Unbal.                              |
| TD LTE Bnad 38 Rx                  | F6KB2G595B4HS        | 1.4×1.0×0.5       | 2.6                 | —                | 150ohm output                       |
| TD LTE Band 38+40 (Common output)  | G6QE2G595N2EJ        | 1.5×1.1×0.5       | 2.9/2.8             | —                | Balanced 100ohm                     |
| TD LTE Band 40 Rx                  | F6KB2G350B4HT        | 1.4×1.0×0.5       | 2.7                 | —                | 150ohm output                       |
|                                    | F6KB2G350B4HTB       | 1.4×1.0×0.5       | 2.5                 | —                | Balanced 100ohm                     |

**Other**

| System                             | Part number          | Package Size (mm) | Insertion Loss (dB) | Attenuation (dB) | Remarks         |
|------------------------------------|----------------------|-------------------|---------------------|------------------|-----------------|
| ISM900 (B.W.26MHz)                 | FAR-F5QA-915M00-M2AK | 1.1×0.9×0.5       | 1.8                 | —                |                 |
| TD-SCDMA/TD-LTE Band 34            | FAR-F6KA-2G0175-D4DR | 1.4×1.0×0.5       | 1.8                 | —                | High Att        |
| TD-SCDMA/TD-LTE Band 39            | FAR-F6KA-1G9000-D4DS | 1.4×1.0×0.5       | 1.6                 | —                |                 |
| TD-SCDMA Band 34+39                | G6QJ2G017M2MD        | 1.5×1.1×0.5       | 1.3/1.4             | —                | 2 IN/2 OUT      |
|                                    | G6QJ2G017M2RD        | 1.5×1.1×0.5       | 1.6/2.0             | —                | 1 IN/2 OUT      |
| TD-SCDMA Band 39+34 (Common input) | G6QD2G017N2DU        | 1.5×1.1×0.5       | 1.7/2.0             | —                | Balanced 100ohm |
| TD-SCDMA Band 34+39 (Common input) | G6QD2G017N2DC        | 1.5×1.1×0.5       | 2.2/1.8             | —                | Balanced 200ohm |
| Wireless LAN                       | FAR-F6KA-2G4418-D4CU | 1.4×1.0×0.5       | 2.6                 | —                | +10dBm          |
|                                    | FAR-F6KA-2G4418-A4VA | 1.4×1.0×0.5       | 3.0                 | —                | +23dBm          |
|                                    | FAR-F6KA-2G4500-A4VD | 1.4×1.0×0.5       | 1.9                 | —                | Low IL,+19dBm   |
|                                    | F6KA2G436A4VE        | 1.4×1.0×0.5       | 2.5                 | —                | BW=72MHz,+24dBm |
|                                    | F6KA2G466A4VJ        | 1.4×1.0×0.5       | 2.8                 | —                | BW=68MHz,+24dBm |

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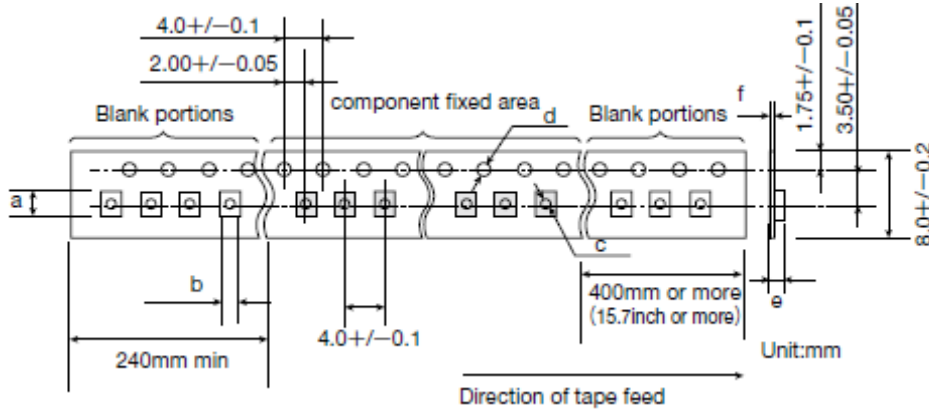
# SAW/FBAR DEVICES (FILTER / DUPLEXERS)

## PACKAGING

### ① Minimum Quantity

| Type          | Size (mm) | Code & Quantity (Pieces) |      |   |      |   |       |   |       |
|---------------|-----------|--------------------------|------|---|------|---|-------|---|-------|
| Duplexer      | 3.0 × 2.5 | Z                        | 3000 |   |      | U | 10000 |   |       |
|               | 2.5 × 2.0 | Z                        | 3000 |   |      | U | 10000 |   |       |
|               | 2.0 × 1.6 | Z                        | 3000 |   |      |   |       | Y | 15000 |
| Single Filter | 2.0 × 1.6 | Z                        | 3000 |   |      |   |       | Y | 15000 |
|               | 1.4 × 1.0 | Z                        | 3000 |   |      |   |       | Y | 15000 |
|               | 1.1 × 0.9 |                          |      | J | 5000 |   |       | Y | 15000 |
| Dual Filter   | 2.0 × 1.6 | Z                        | 3000 |   |      |   |       | Y | 15000 |
|               | 1.8 × 1.4 | Z                        | 3000 |   |      |   |       | Y | 15000 |
|               | 1.5 × 1.1 |                          |      | J | 5000 |   |       | Y | 15000 |

### ② Tape material



### ● Taping dimensions

| Type          | Size (mm) | a         | b          | c               | d               | e                 | f           |
|---------------|-----------|-----------|------------|-----------------|-----------------|-------------------|-------------|
| Duplexer      | 3.0 × 2.5 | 3.4 ± 0.1 | 2.85 ± 0.1 | 1.05 ± 0.05     | 1.55 ± 0.05     | 1.0 ± 0.1         | 0.25 ± 0.05 |
|               | 2.5 × 2.0 | 2.8 ± 0.1 | 2.3 ± 0.1  | 1.5 + 0.1 / - 0 | 1.5 + 0.1 / - 0 | 1.0 + 0.1 / - 0.0 | 0.25 ± 0.05 |
|               | 2.0 × 1.6 | 2.4 ± 0.1 | 2.0 ± 0.1  | 1.05 ± 0.05     | 1.5 + 0.1 / - 0 | 0.90 - 0.05       | 0.25 ± 0.05 |
| Single Filter | 2.0 × 1.6 | 2.4 ± 0.1 | 2.0 ± 0.1  | 1.05 ± 0.05     | 1.5 + 0.1 / - 0 | 0.90 - 0.05       | 0.25 ± 0.05 |
|               | 1.4 × 1.0 | 1.7 ± 0.1 | 1.3 ± 0.1  | 0.5 ± 0.05      | 1.5 + 0.1 / - 0 | 0.63 ± 0.05       | 0.20 ± 0.05 |
|               | 1.1 × 0.9 | 1.3 ± 0.1 | 1.1 ± 0.1  | 0.5 ± 0.05      | 1.55 ± 0.05     | 0.63 ± 0.05       | 0.20 ± 0.05 |
| Dual Filter   | 2.0 × 1.6 | 2.4 ± 0.1 | 2.0        | 1.05 ± 0.05     | 1.5 + 0.1 / - 0 | 0.90 - 0.05       | 0.25 ± 0.05 |
|               | 1.8 × 1.4 | 2.2 ± 0.1 | 1.8        | 0.5 ± 0.05      | 1.55 ± 0.05     | 0.8 ± 0.1         | 0.30 ± 0.05 |
|               | 1.5 × 1.1 | 1.8 ± 0.1 | 1.4        | 0.5 ± 0.05      | 1.5 + 0.1 / - 0 | 0.7 ± 0.1         | 0.25 ± 0.05 |

Unit: mm

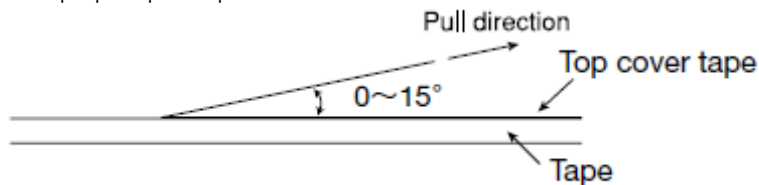
### ● Material of Tape (Conductive)

Tape : Polystyrene

Top cover tape : Polyethylene terephthalate (PET) and Polyethylene

### ③ Top Tape Strength

The top tape requires a peel-off force of 0.1 to 1.0N in the direction of the arrow as illustrated below.



#### ④ Reel size



#### ● Material of Reel

Material : Polystyrene + Carbon

Characteristics : Conform to EIAJ-ET-7200A

Color : Black

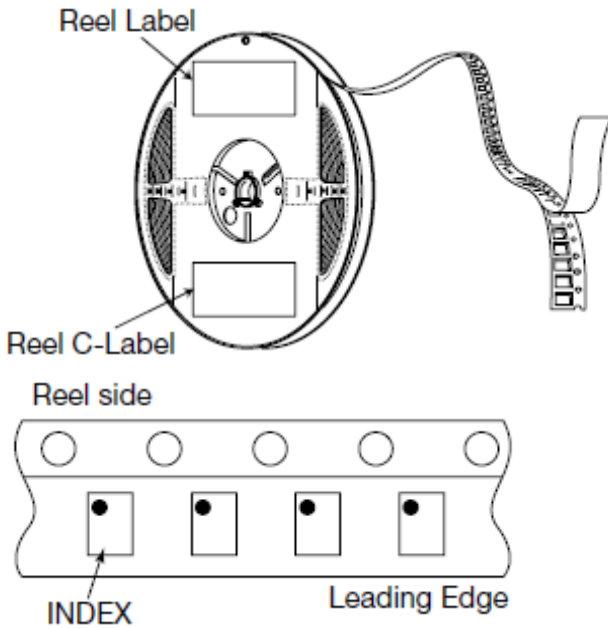
Surface resistance (reference value) : 109 Ω /sq Max.

| Code | Quantity   | A                 | B            | C           | W1            | W2        |
|------|------------|-------------------|--------------|-------------|---------------|-----------|
| Z    | 3,000 pcs  | φ 180.0 +0.0/-1.5 | φ 66.0 ±0.5  | φ 13.0 ±0.2 | 9.0 +1.0/-0.0 | 11.4 ±1.0 |
| J    | 5,000 pcs  | φ 180.0 +0.0/-1.5 | φ 66.0 ±0.5  | φ 13.0 ±0.2 | 9.0 +1.0/-0.0 | 11.4 ±1.0 |
| U    | 10,000 pcs | φ 330.0 ±2.0      | φ 100.0 ±1.0 | φ 13.0 ±0.2 | 9.4 ±1.0      | 13.4 ±1.0 |
| Y    | 15,000 pcs | φ 330.0 ±2.0      | φ 100.0 ±1.0 | φ 13.0 ±0.2 | 9.4 ±1.0      | 13.4 ±1.0 |

Unit : mm

#### ⑤ Reel label and Reel C-Label sticking and Winding method

#### ● Surface



# Filter

## RELIABILITY DATA

| 1. Terminal strength             |  |
|----------------------------------|--|
| Specified Value                  | No damage to be found.   |
| Test Methods and Remarks         | Bending Test.<br>according to IEC60068-2-21(JISC60068-2-21)<br>   |
| 2. Mechanical shock              |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | Apply 14700m/s <sup>2</sup> for 0.5ms 5 times for each of 6 directions.<br>according to IEC68-2-27(JISC60068-2-27).  |
| 3. Vibration                     |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | With 1.5 mm of whole amplitude at 10 to 55 Hz of frequency, and 98m/s <sup>2</sup> of acceleration at 55 to 500Hz, apply a vibration for 2 hours for each of 3 directions, period is 15 minutes(10 to 500 to 10Hz) |
| 4. Drop 1                        |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | Drop 3 times onto concrete floor from the height of 1.0m.  |
| 5. Drop 2                        |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | Drop with 150g weight 3 times in each 6 direction onto concrete floor from the height of 1.8m.   |
| 6. Temperature cycling           |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | Temp. range -40 to +100°C. 500cycle.   |
| 7. Static humidity               |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | +85°C, 90% to 95%RH, apply DC5V, 1000hours.  |
| 8. High temperature storage life |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | +100°C, 1000hours.   |
| 9. Low temperature storage life  |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | -40°C, 1000hours.  |

10. Solderability 1

|                          |  |
|--------------------------|--|
| Specified Value          | More than 90% of area of terminals to be covered with the solder.<br>A change of the remarkable appearance do not have it. |
| Test Methods and Remarks | Lead-free Solder paste, Reflow; Peak temperature 245°C   |

11. Solderability 2

|                          |  |
|--------------------------|--|
| Specified Value          | More than 90% of area of terminals to be covered with the solder.<br>A change of the remarkable appearance do not have it. |
| Test Methods and Remarks | Sn-Pb Solder paste, Reflow; Peak temperature 235°C   |

12. Solder heat resistance

|                          |   |
|--------------------------|---|
| Specified Value          | After testing, meet the specified characteristics at a room temperature.<br>A change of the remarkable appearance do not have it.   |
| Test Methods and Remarks | <p>◆Recommended temperature profile of reflow soldering</p> <p>Figure shows recommended temperature profile of reflow soldering in the case of lead-free solder alloy Sn3.0Ag0.5Cu. Suitable condition for solder heating is differed depending on composition and manufacturing method. Please contact to solder manufacturer for the details.</p> |

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# Duplexer

## RELIABILITY DATA

| 1. Terminal strength             |  |
|----------------------------------|--|
| Specified Value                  | No damage to be found.   |
| Test Methods and Remarks         | <p>Bend width 4mm, hold for <math>5 \pm 1</math> sec. according to IEC60068-2-21(JISC60068-2-21)</p>  <p>Unit : mm</p>          |
| 2. Mechanical shock              |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | Apply $14700\text{m/s}^2$ for 0.5ms 5 times for each of 6 directions. according to IEC68-2-27(JISC60068-2-27).   |
| 3. Vibration                     |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | With 1.5 mm of whole amplitude at 10 to 55 Hz of frequency, and $98\text{m/s}^2$ of acceleration at 55 to 500Hz, apply a vibration for 2 hours for each of 3 directions, period is 15 minutes(10 to 500 to 10Hz) |
| 4. Drop 1                        |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | Drop 3 times onto concrete floor from the height of 1.0m.  |
| 5. Drop 2                        |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | Drop with 150g weight 3 times in each 6 direction onto concrete floor from the height of 1.8m.   |
| 6. Temperature cycling           |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | Temp. range $-40$ to $+100^\circ\text{C}$ . 500cycle.  |
| 7. Static humidity               |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | $+85^\circ\text{C}$ , 90% to 95%RH, apply DC5V, 1000hours.   |
| 8. High temperature storage life |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | $+100^\circ\text{C}$ , 1000hours.  |
| 9. Low temperature storage life  |  |
| Specified Value                  | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks         | $-40^\circ\text{C}$ , 1000hours.   |

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| 10. High Temperature Bias  |  |
|----------------------------|--|
| Specified Value            | After testing, meet the specified characteristics at a room temperature.   |
| Test Methods and Remarks   | +50°C, +29dBm, 50000hours.   |
| 11. Solderbility 1         |  |
| Specified Value            | More than 90% of area of terminals to be covered with the solder.<br>A change of the remarkable appearance do not have it.   |
| Test Methods and Remarks   | Lead-free Solder paste, Reflow; Peak temperature 245°C   |
| 12. Solderbility 2         |  |
| Specified Value            | More than 90% of area of terminals to be covered with the solder.<br>A change of the remarkable appearance do not have it.   |
| Test Methods and Remarks   | Sn-Pb Solder paste, Reflow; Peak temperature 235°C   |
| 13. Solder heat resistance |  |
| Specified Value            | After testing, meet the specified characteristics at a room temperature.<br>A change of the remarkable appearance do not have it.  |
| Test Methods and Remarks   | <p>◆Recommended temperature profile of reflow soldering<br/>Figure shows recommended temperature profile of reflow soldering in the case of lead-free solder alloy Sn3.0Ag0.5Cu.<br/>Suitable condition for solder heating is differed depending on composition and manufacturing method.<br/>Please contact to solder manufacturer for the details.</p> |

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