

Dielectric Filters (GIGAFIL®)



muRata

*Innovator
in Electronics*

Murata
Manufacturing Co., Ltd.

for EU RoHS Compliant

- All the products on this catalog are complied with EU RoHS.
- EU RoHS is "the European Directive 2002/95/EC on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment".
- For more details, please refer to our website 'Murata's Approach for EU RoHS' (<http://www.murata.com/info/rohs.html>).

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GIGAFIL® in this catalog is the trademark of Murata Manufacturing Co., Ltd.

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2

● Part Numbering

Antenna/Duplexer Dielectric Filters (GIGAFIL®)
for RF/Local Dielectric Band Pass Filters (GIGAFIL®)

(Part Number)

DF

YK6

1G95

LBNBB-

TT1

1

2

3

4

5

①Product ID

Product ID	
DF	Microwave Filters (GIGAFIL®)

②Series

Two capital letters and a number express the series name.

③Nominal Center Frequency

Expressed by four-digit alphanumerics. If the unit is "MHz", it is expressed by three figures plus "M". If the unit is "GHz", a decimal point is expressed by capital letter "G".

④Individual Specification Code

Expressed by five letters plus a hyphen.

⑤Packaging

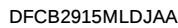
Code	Packaging
T**	Tray
R**	Reel

Packaging varies on each product type. Please contact us for details.

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1

1. Low insertion loss for using high Q-value dielectric resonators.
2. Small and light for using high dielectric constant ceramics.
3. Excellent temperature stability for temperature compensated dielectric constant ($0 \pm 5 \text{ ppm}/(\text{degree C}) \text{ max}$).
4. Excellent mechanical stability without vibratile structure.
5. SMD and reflow soldering is available.
6. Mountable by automatic placing machine.



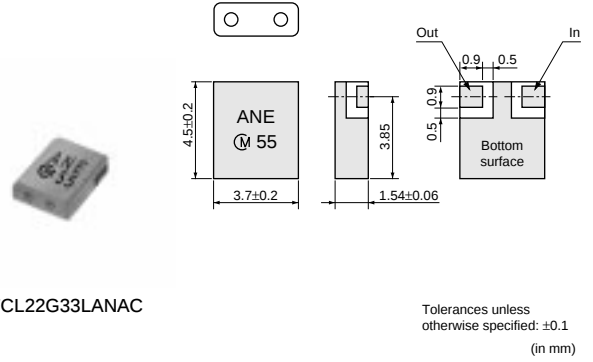
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DFCB/DFCL Series 1.5-5GHz

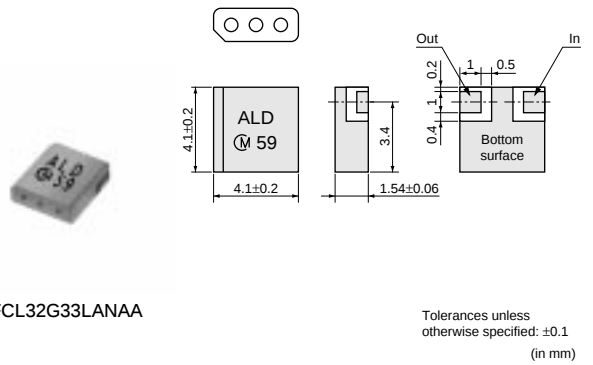
■ Features

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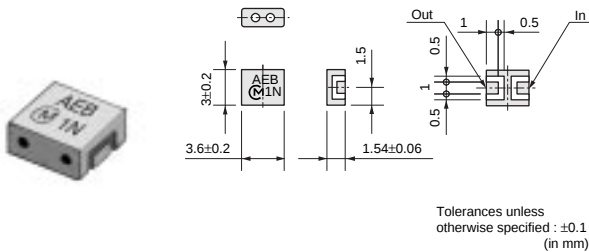
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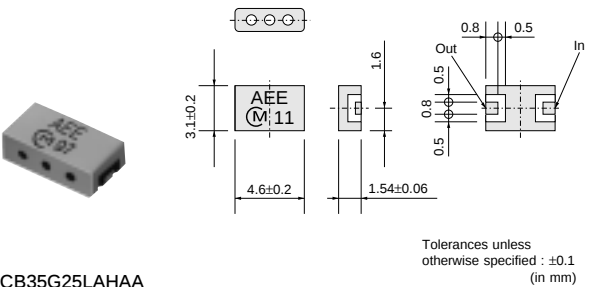
DFCL32G33LANAA



DFCB25G25LAHAA

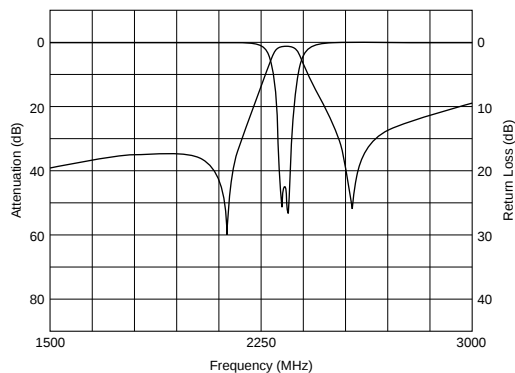


DFCB35G25LAHAA

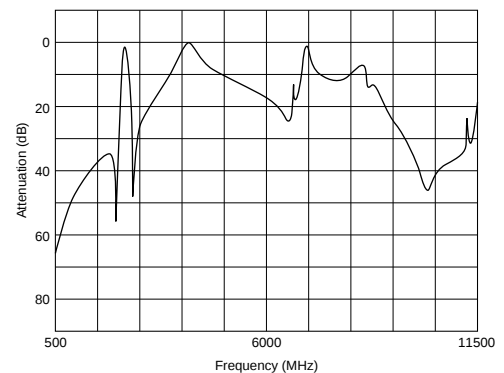


■ Characteristics

Pass Band: DFCL22G33LANAC



Spurious: DFCL22G33LANAC

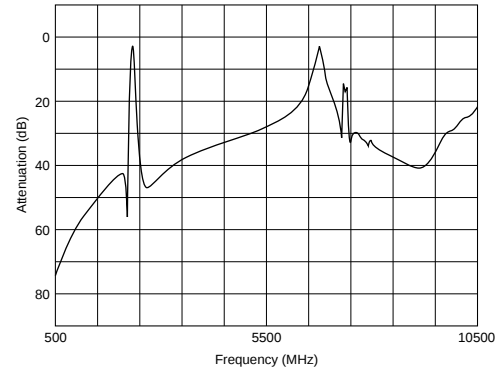


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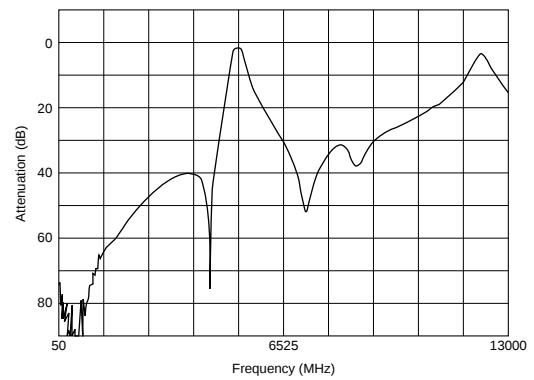
■ Characteristics

1

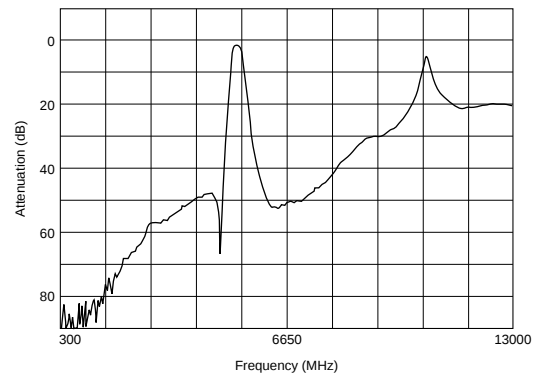
Spurious: DFCL32G33LANAA



Spurious: DFCB25G25LAHAA



Spurious: DFCB35G25LAHAA

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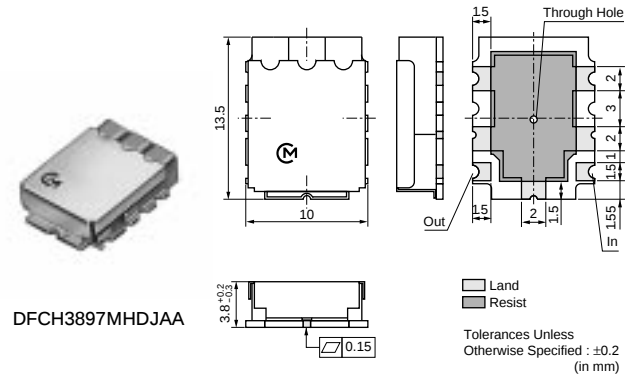
Continued from the preceding page.

Application	Part Number	fo (MHz)	Bandwidth (MHz)	IL at BW (dB max.)	Attenuation (dB min.)	Operation Temperature Range (°C)
Wibro	DFCB22G34LBJAA	2345	80	2.5	20 (350 to 1200MHz)	-35 to +85
WLAN2.4	DFCB22G44LBJAA	2442	84	2.0	16 (Fo-250MHz)	-40 to +85
WLAN2.4	DFCB22G45LBJAA	2450	100	2.0	15 (Fo-250MHz)	-40 to +85
WLAN5G	DFCB25G25LAHAA	5250	200	1.5	38 (4370 to 4510MHz)	-35 to +85
WLAN5G	DFCB25G59LAHAA	5597.5	255	1.5	11 (Fo-375MHz)	-35 to +85
WLAN5G	DFCB25G77LAHAA	5775	100	1.5	12 (Fo-375MHz)	-35 to +85
DAB	DFCB31G47LBJAA	1472	40	3.0	45 (1100MHz)	-35 to +85
DCS1800	DFCB31G74LBJAA	1747.5	75	3.5	45 (1464 to 1539MHz)	-35 to +85
DCS1800	DFCB31G84LBJAA	1842.5	75	3.5	45 (1559 to 1634MHz)	-35 to +85
DCS1800	DFCB31G84LBJAB	1842.5	75	2.75	45 (0.3 to 1500MHz)	-35 to +85
PCS1.9	DFCB31G88LBJAA	1880	60	3.7	43 (1640 to 1664MHz)	-35 to +85
PCS1.9	DFCB31G88LBJAB	1880	60	4.0	41 (2043 to 2103MHz)	-35 to +85
W-CDMA	DFCB31G95LBJAA	1950	60	3.5	35 (2110 to 2170MHz)	-35 to +85
PCS1.9	DFCB31G96LBJAA	1960	60	3.7	5 (1910MHz)	-35 to +85
PCS1.9	DFCB31G96LBJAB	1960	60	3.0	10 (1498 to 1860MHz)	-35 to +85
W-CDMA	DFCB32G14LBJAA	2140	60	3.7	30 (1920 to 1980MHz)	-35 to +85
Sirius Radio	DFCB32G32LBJAA	2326	14	3.0	24 (2227MHz)	-35 to +85
XM Satellite	DFCL32G33LANAA	2339	14	3.0	39 (0.3 to 2188MHz)	-40 to +125
WLAN2.4	DFCB32G44LBJAA	2442	84	3.2	30 (Fo-250MHz)	-40 to +85
WLAN2.4	DFCB32G45LBJAA	2450	100	3.2	30 (Fo-250MHz)	-40 to +85
MMDS/WiMax	DFCB32G59LBHAA	2595	190	2.0	40 (1930 to 2170MHz)	-35 to +85
MMDS/WiMax	DFCB32G59LBHAB	2595	190	1.5	35 (1930 to 2170MHz)	-35 to +85
FWA	DFCL33G40LCHAA	3400	200	2.0	38 (3050MHz)	-35 to +85
FWA	DFCL33G40LCHAB	3400	200	1.3	30 (3050MHz)	-35 to +85
WiMAX	DFCL33G50LCHAA	3500	200	2.0	38 (3150MHz)	-35 to +85
WiMAX	DFCL33G50LCHAB	3500	200	1.3	30 (3150MHz)	-35 to +85
WiMAX	DFCL33G55LCHAB	3550	300	3.0	40 (450MHz)	-35 to +85
FWA	DFCL33G60LCHAA	3600	200	2.0	38 (3250MHz)	-35 to +85
FWA	DFCL33G60LCHAB	3600	200	1.3	30 (3250MHz)	-35 to +85
FWA	DFCL33G70LCHAA	3700	200	2.0	38 (3350MHz)	-35 to +85
FWA	DFCL33G70LCHAB	3700	200	1.3	30 (3350MHz)	-35 to +85
WLAN5G	DFCB35G25LAHAA	5250	200	3.3	45 (4450 to 4650MHz)	-35 to +85
WLAN5G	DFCB35G59LAHAA	5597.5	255	3.6	45 (4750 to 5000MHz)	-35 to +85
WLAN5G	DFCB35G77LAHAA	5775	100	3.0	30 (Fo-375MHz)	-35 to +85

DFCH Series 800/900MHz

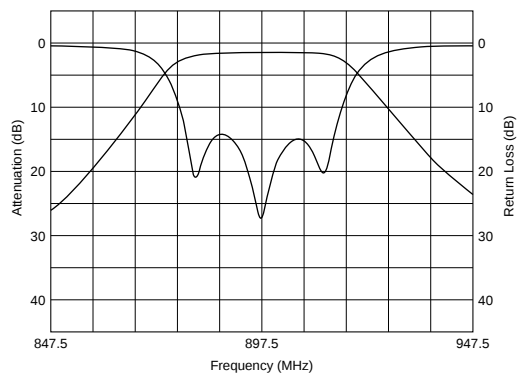
■ Features

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5. SMD and reflow soldering is available.
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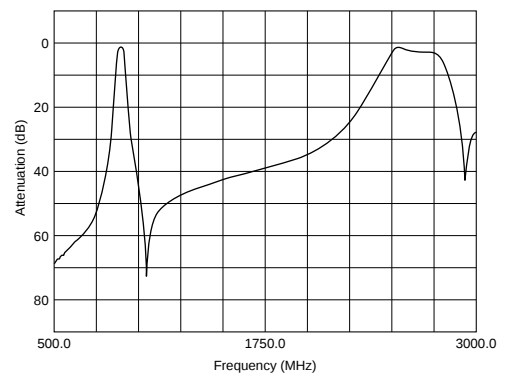


■ Characteristics

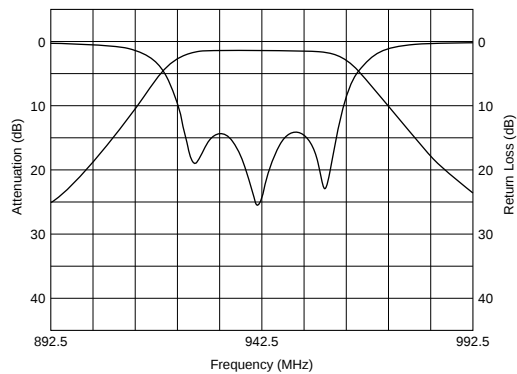
Pass Band: DFCH3897MHDJAA



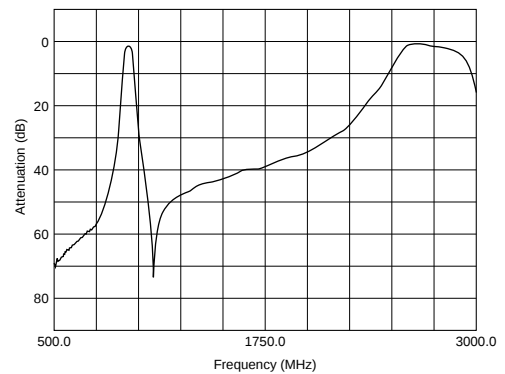
Spurious: DFCH3897MHDJAA



Pass Band: DFCH3942MHDJAA

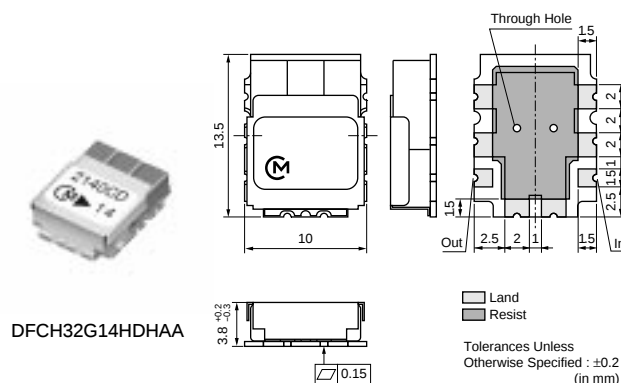


Spurious: DFCH3942MHDJAA

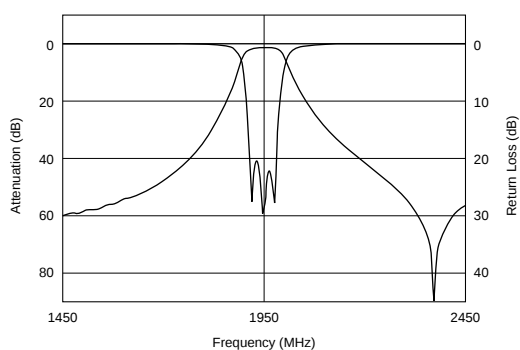


Application	Part Number	f ₀ (MHz)	Bandwidth (MHz)	IL at BW (dB max.)	Attenuation (dB min.)	Operation Temperature Range (°C)
LMR	DFCH3815MHDJAA	815	20	2.8	36 (Fo±80MHz)	-35 to +85
AMPS	DFCH3836MHDJAA	836.5	25	2.6	12 (Fo±32.5MHz)	-35 to +85
LMR	DFCH3860MHDJAA	860	20	2.8	36 (Fo±80MHz)	-35 to +85
AMPS	DFCH3881MHDJAA	881.5	25	2.6	12 (Fo±32.5MHz)	-35 to +85
EGSM	DFCH3897MHDJAA	897.5	35	3.0	6 (Fo±27.5MHz)	-35 to +85
GSM	DFCH3902MHDJAA	902.5	25	2.6	12 (Fo±32.5MHz)	-35 to +85
EGSM	DFCH3942MHDJAA	942.5	35	3.0	6 (Fo±27.5MHz)	-35 to +85
GSM	DFCH3947MHDJAA	947.5	25	2.6	12 (Fo±32.5MHz)	-35 to +85
EGSM	DFCH4897MHDJAA	897.5	35	4.6	13 (Fo±27.5MHz)	-35 to +85
EGSM	DFCH4942MHDJAA	942.5	35	4.6	13 (Fo±27.5MHz)	-35 to +85

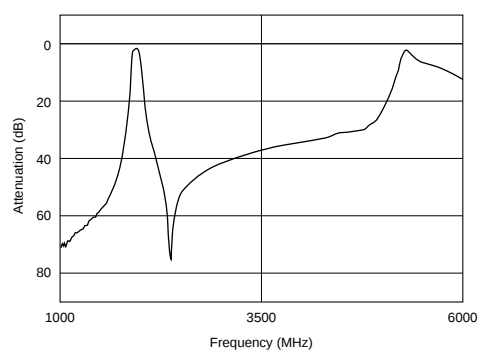
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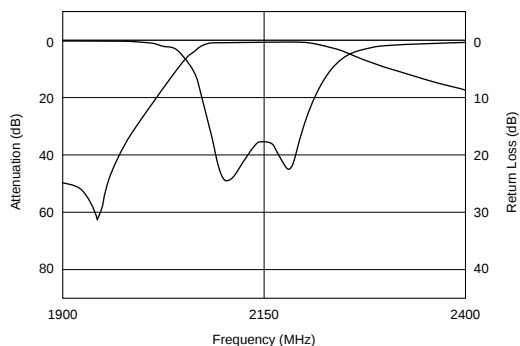
Pass Band: DFCH31G95HDHAA



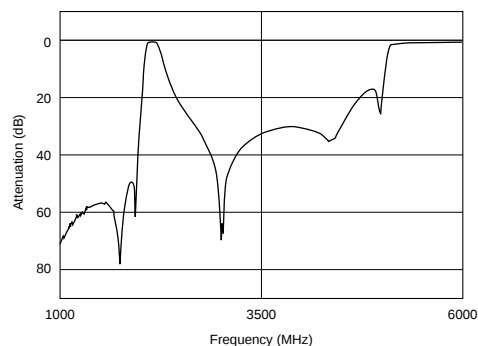
Spurious: DFCH31G95HDHAA



Pass Band: DFCH32G14HDHAA



Spurious: DFCH32G14HDHAA

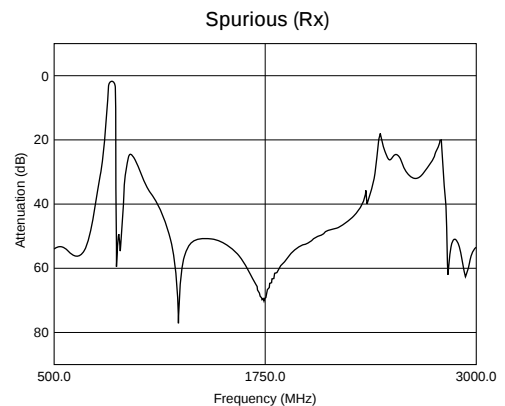
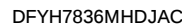


Application	Part Number	fo (MHz)	Bandwidth (MHz)	IL at BW (dB max.)	Attenuation (dB min.)	Operation Temperature Range (°C)
GPS	DFCH21G57HDHAA	1575.5	2	0.9	16 (Fo-140MHz)	-35 to +85
TD-SCDMA	DFCH22G01HDJAA	2017.5	15	1.8	22 (1899 to 1915MHz)	-40 to +85
WLAN2.4	DFCH22G44HDHAA	2442	84	1.2	15 (Fo±250MHz)	-35 to +85
WLAN2.4	DFCH22G45HDHAA	2450	100	1.0	16 (Fo-250MHz)	-35 to +85
MSAT	DFCH31G54HDJAA	1542	34	3.0	30 (1626.5 to 1660.5MHz)	-35 to +85
MSAT	DFCH31G64HDJAA	1643.5	34	3.0	30 (1525 to 1559MHz)	-35 to +85
DCS1800	DFCH31G74HDJAA	1747.5	75	2.0	8 (Fo±80MHz)	-35 to +85
DCS1800	DFCH31G84HDJAA	1842.5	75	2.0	8 (Fo±80MHz)	-35 to +85
PCS1.9	DFCH31G88HDJAA	1880	60	2.2	15 (Fo±100MHz)	-35 to +85
W-CDMA	DFCH31G95HDHAA	1950	60	1.8	45 (1550MHz)	-35 to +85
PCS1.9	DFCH31G96HDJAA	1960	60	2.2	15 (Fo±100MHz)	-35 to +85
TD-SCDMA	DFCH32G01HDNAA	2017.5	15	3.0	38 (1920MHz)	-35 to +85
W-CDMA	DFCH32G14HDHAA	2140	60	1.3	52 (1325 to 1385MHz)	-35 to +85
WLAN2.4	DFCH32G44HDHAA	2442	84	2.4	36 (Fo-250MHz)	-35 to +85
WLAN2.4	DFCH32G45HDHAA	2450	100	2.3	36 (Fo-250MHz)	-35 to +85
MMDS/WiMax	DFCH32G59HDHBA	2593	186	1.0	30 (1930 to 1990MHz)	-35 to +85
DCS1800	DFCH41G74HDJAA	1747.5	75	3.6	10 (Fo±57.5MHz)	-35 to +85
DCS1800	DFCH41G84HDJAA	1842.5	75	3.6	10 (Fo±57.5MHz)	-35 to +85
PCS1.9	DFCH41G88HDJAA	1880	60	4.5	12 (Fo±50MHz)	-35 to +85
PCS1.9	DFCH41G96HDJAA	1960	60	4.5	12 (Fo±50MHz)	-35 to +85

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2 | AMPS/CDMA800: DFYH Series

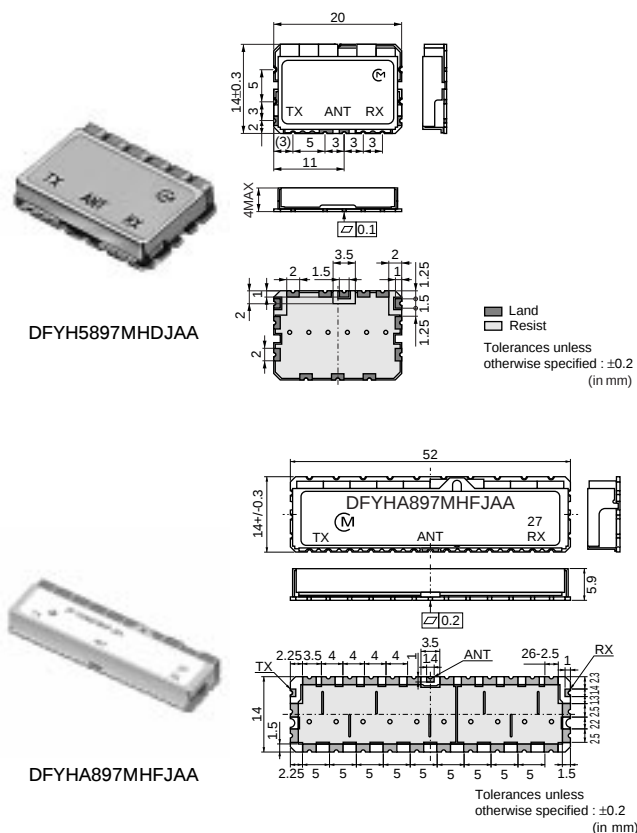
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10 

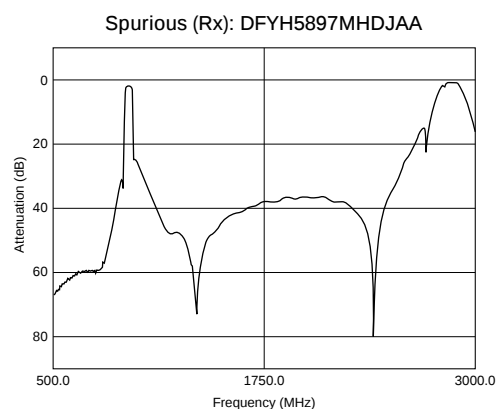
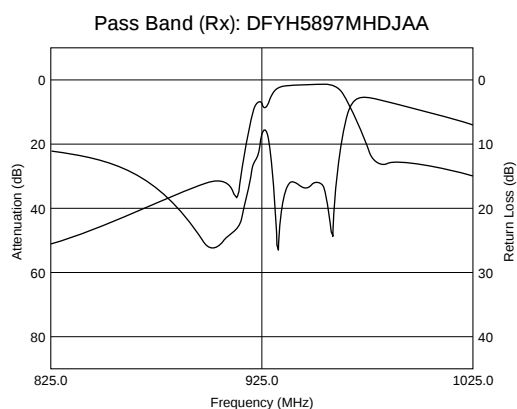
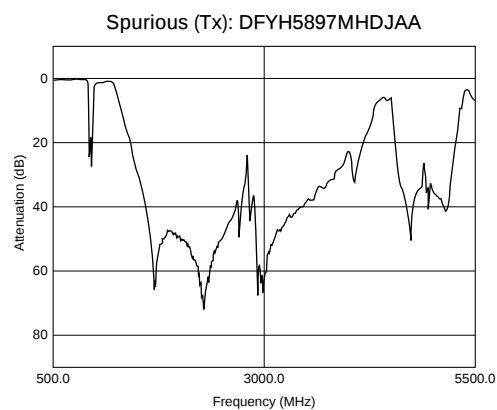
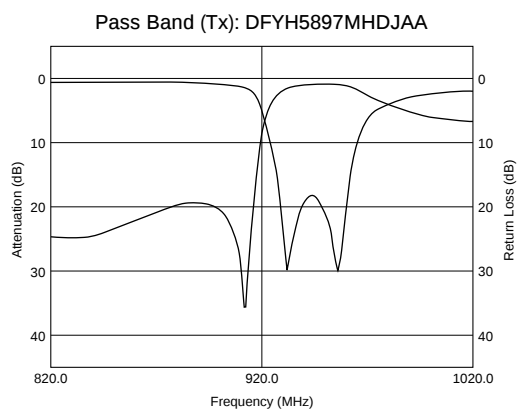
EGSM: DFYH Series

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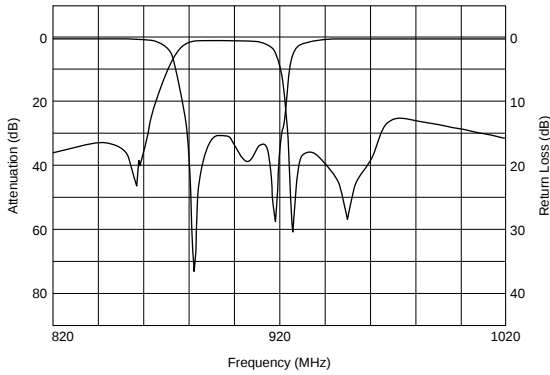


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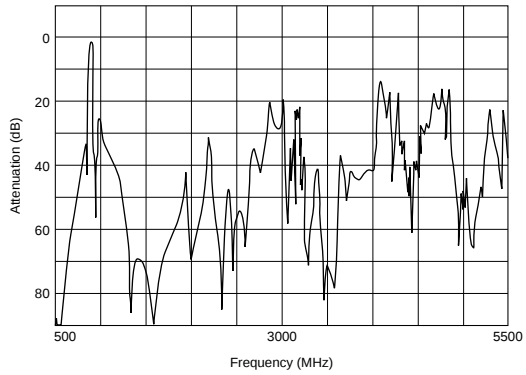
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■ Characteristics

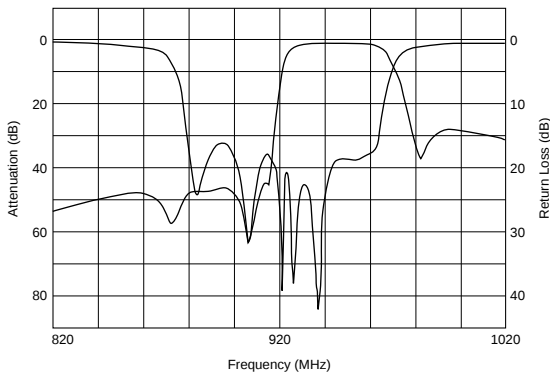
Pass Band (Tx): DFYHA897MHFJAA



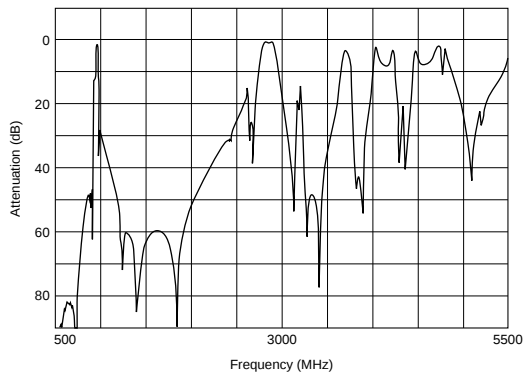
Spurious (Tx): DFYHA897MHFJAA



Pass Band (Rx): DFYHA897MHFJAA



Spurious (Rx): DFYHA897MHFJAA

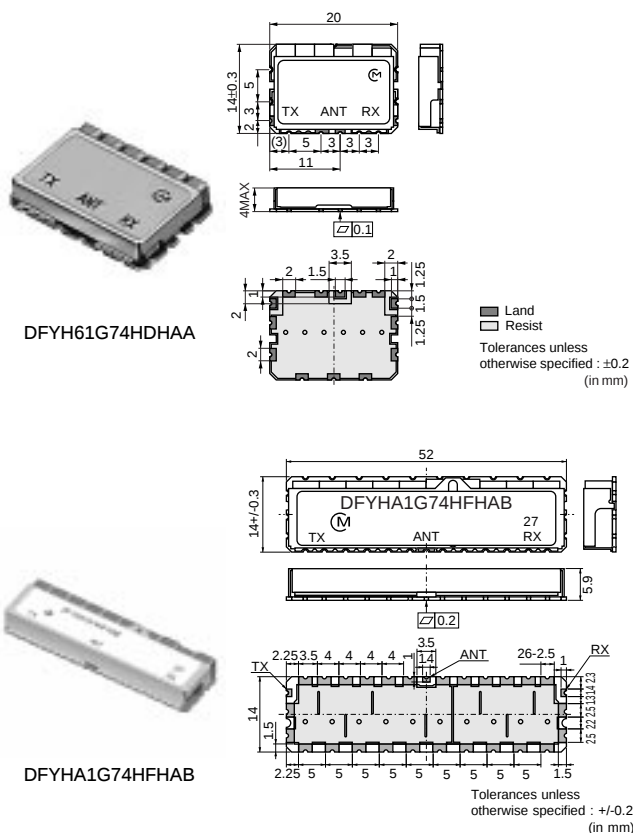


Part Number	fo (Tx) (MHz)	Bandwidth (Tx) (MHz)	IL at BW (dB max.)	Attenuation (dB min.)	fo (Rx) (MHz)	Bandwidth (Rx) (MHz)	IL at BW (dB max.)	Attenuation (dB min.)	Operation Temperature Range (°C)
DFYH5897MHDJAA	897.5	35	2.0	15 (935 to 960MHz)	942.5	35	4.3	20 (905 to 915MHz)	-30 to +85
DFYHA897MHFJAA	897.5	35	3.7	30 (925 to 960MHz)	942.5	35	4.4	40 (880 to 915MHz)	-35 to +85

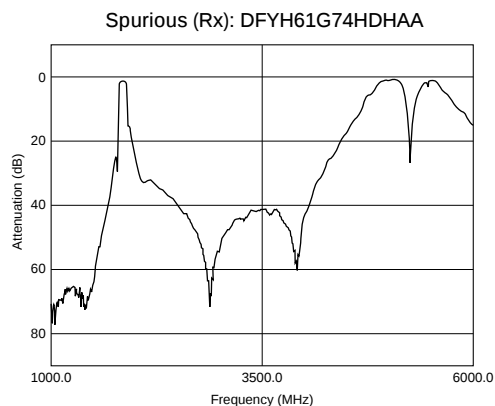
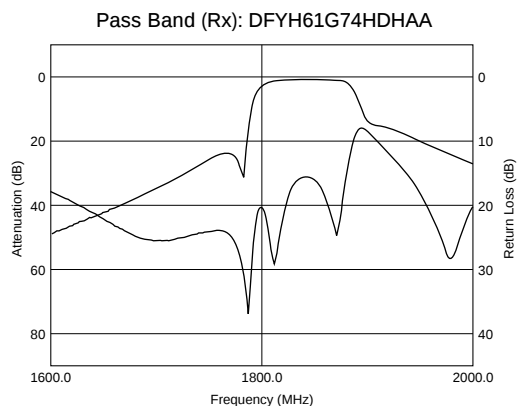
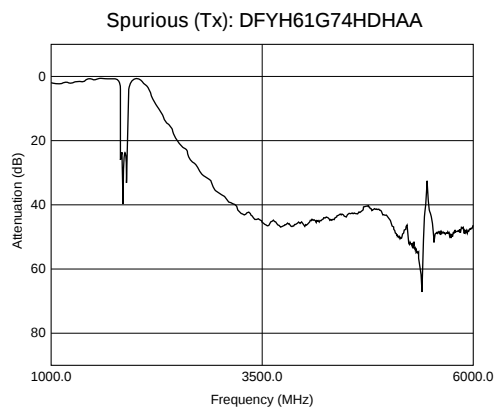
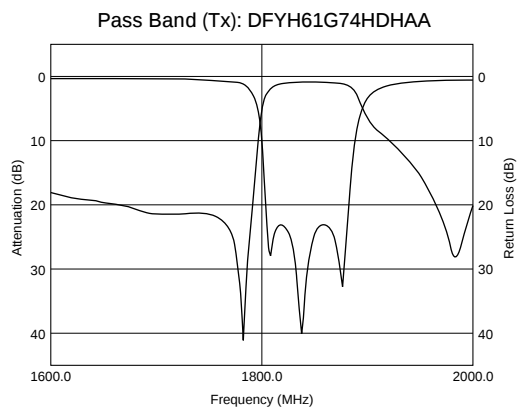
DCS1800: DFYH Series

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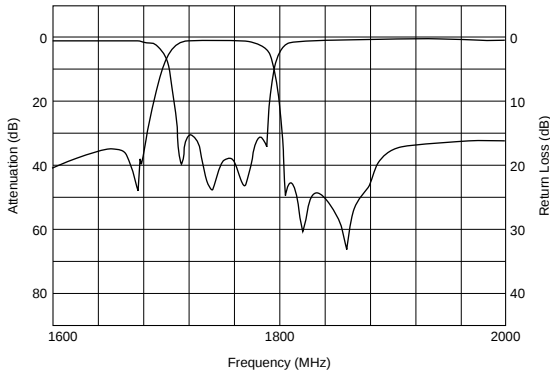


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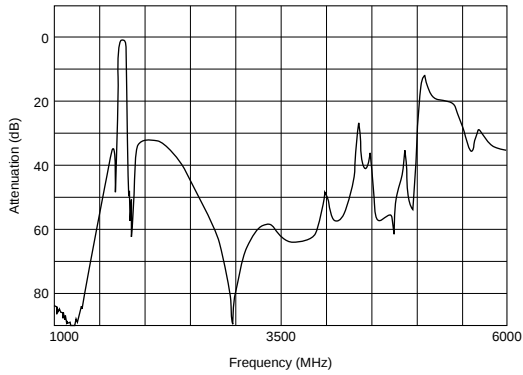
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■ Characteristics

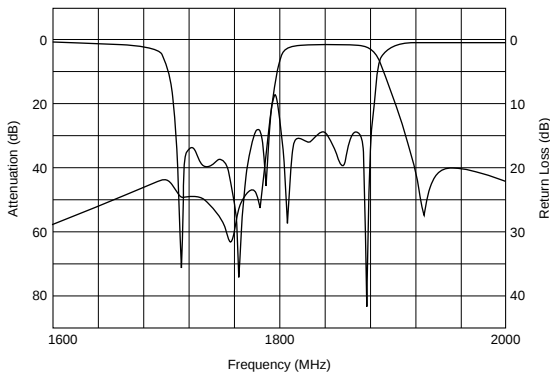
Pass Band (Tx): DFYHA1G74HFHAB



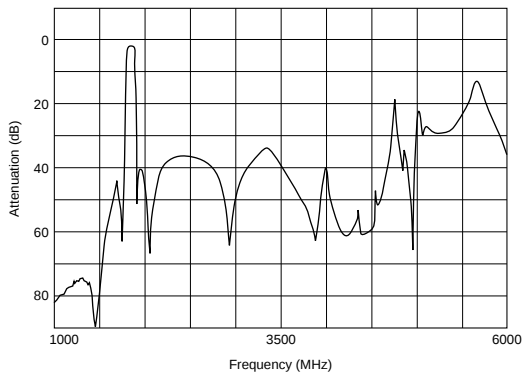
Spurious (Tx): DFYHA1G74HFHAB



Pass Band (Rx): DFYHA1G74HFHAB



Spurious (Rx): DFYHA1G74HFHAB

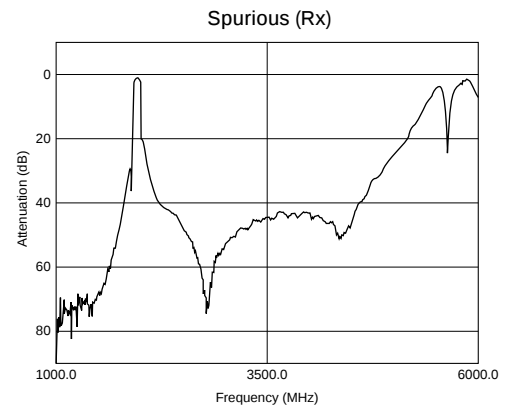
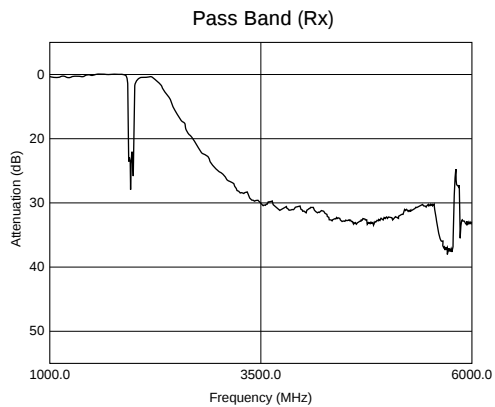
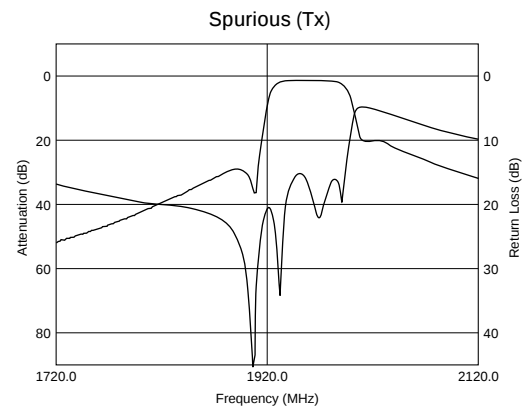


Part Number	fo (Tx) (MHz)	Bandwidth (Tx) (MHz)	IL at BW (dB max.)	Attenuation (dB min.)	fo (Rx) (MHz)	Bandwidth (Rx) (MHz)	IL at BW (dB max.)	Attenuation (dB min.)	Operation Temperature Range (°C)
DFYH61G74HDHAA	1747.5	75	2.3	20 (1805 to 1880MHz)	1842.5	75	2.7	20 (1710 to 1785MHz)	-30 to +85
DFYH61G74HDHAB	1747.5	75	2.0	15 (1805 to 1880MHz)	1842.5	75	3.0	20 (1710 to 1785MHz)	-30 to +85
DFYHA1G74HFHAB	1747.5	75	3.8	42 (1805 to 1880MHz)	1842.5	75	4.3	42 (1710 to 1785MHz)	-35 to +85

■ Features

-
- DFYH61G88HDHAA
- Technical drawing of the DFYH61G88HDHAA component showing dimensions in mm. The component is a rectangular package with a central square area labeled 'TX ANT RX'. The dimensions are as follows:
- Overall width: 20 mm
 - Overall height: 14 ± 0.3 mm
 - Top edge dimensions: 2, 3, 5 mm
 - Bottom edge dimensions: 2, 3, 5, 3, 3, 3 mm
 - Central square area width: 11 mm
 - Central square area height: 4 MAX mm
 - Central square area thickness: 0.1 mm
 - Bottom edge dimensions: 2, 1.5, 2, 1, 1.5, 1.25 mm
 - Central square area width: 3.5 mm
 - Central square area height: 2 mm
 - Central square area thickness: 1 mm
- Legend:
- Land
 - Resist
- Tolerances unless otherwise specified : ±0.2 (in mm)

The plot, titled "Pass Band (Tx)", displays two metrics against Frequency (MHz) from 1720.0 to 2120.0. The left y-axis represents Attenuation (dB) from 0 to 40, and the right y-axis represents Return Loss (dB) from 0 to 40. The Attenuation curve (black) shows a sharp dip to approximately 38 dB at 1900 MHz and a broader dip to approximately 25 dB at 2000 MHz. The Return Loss curve (red) shows a sharp peak to approximately 35 dB at 1900 MHz and a broader peak to approximately 15 dB at 2000 MHz.



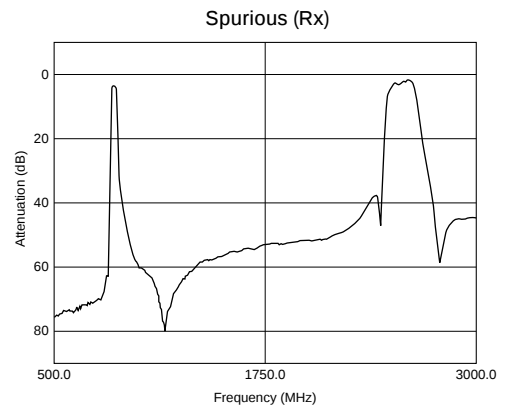
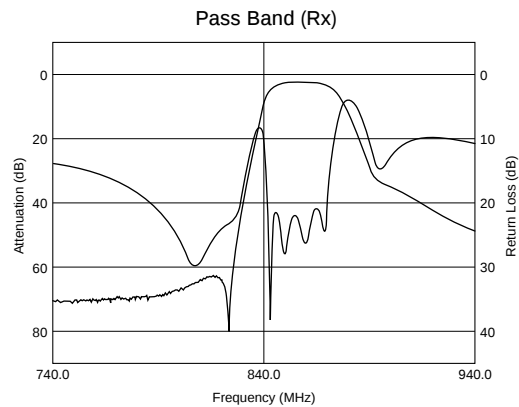
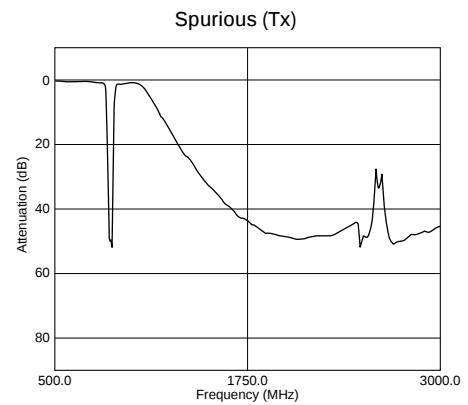
Part Number	fo (Tx) (MHz)	Bandwidth (Tx) (MHz)	IL at BW (dB max.)	Attenuation (dB min.)	fo (Rx) (MHz)	Bandwidth (Rx) (MHz)	IL at BW (dB max.)	Attenuation (dB min.)	Operation Temperature Range (°C)
DFYH61G88HDHAA	1880	60	2.0	17 (1930 to 1990MHz)	1960	60	3.0	20 (1850 to 1910MHz)	-30 to +85
DFYH61G88HDHAB	1880	60	2.3	20 (1930 to 1990MHz)	1960	60	3.2	25 (1850 to 1910MHz)	-30 to +85

2

■ Features

-
- The drawing shows the DFYH7815MHDJAA component with the following dimensions and features:
- Isometric View:** Shows the component's 3D profile with markings "DFYH7815MHDJAA" and "23" on the top surface.
 - Top View:**
 - Overall dimensions: 23 mm (width) x 14 mm (length).
 - Pin pitch: 3.25 mm.
 - Pin width: 2.5 mm.
 - Internal dimensions: 8.25 mm (between pins), 3.8 mm (from pin to TX), 3.3 mm (between TX and ANT), 2.5 mm (between ANT and RX), 2.75 mm (from RX to edge), 11.5 mm (total length of internal pads).
 - Labels: TX, ANT, RX.
 - Side View:**
 - Height: 4 mm max.
 - Mounting pad width: 0.15 mm.
 - Through Holes View:**
 - Dimensions: 3 mm, 6 mm, 3 mm (top); 4.3 mm, 2.4 mm, 2.6 mm (left); 1 mm, 1.25 mm, 2 mm, 2 mm, 2.5 mm (bottom).
 - Label: "Through Holes" with arrows pointing to the holes.
 - Legend:**
 - Land (shaded gray)
 - Resist (white)
 - Tolerances:** Unless otherwise specified: ± 0.2 (in mm).

The plot titled "Pass Band (Tx)" shows the frequency response of the transmission path. The x-axis represents Frequency in MHz, ranging from 740.0 to 940.0. The left y-axis represents Attenuation in dB, ranging from 0 to 80 (inverted scale). The right y-axis represents Return Loss in dB, ranging from 0 to 40 (inverted scale). The Attenuation curve (solid line) shows a sharp dip to approximately 85 dB at 830 MHz, with side lobes around 780 MHz and 850 MHz. The Return Loss curve (dashed line) shows a sharp peak to approximately 35 dB at 830 MHz, indicating a good match at the center frequency.

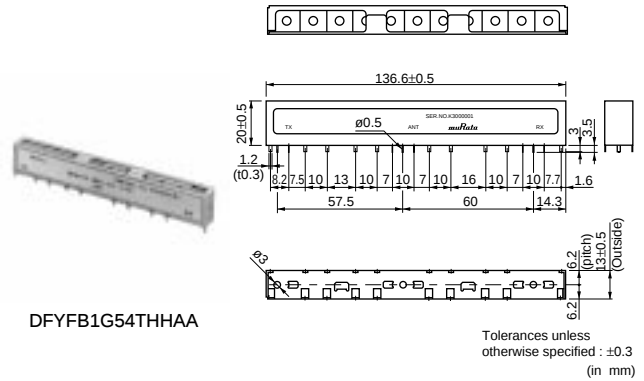


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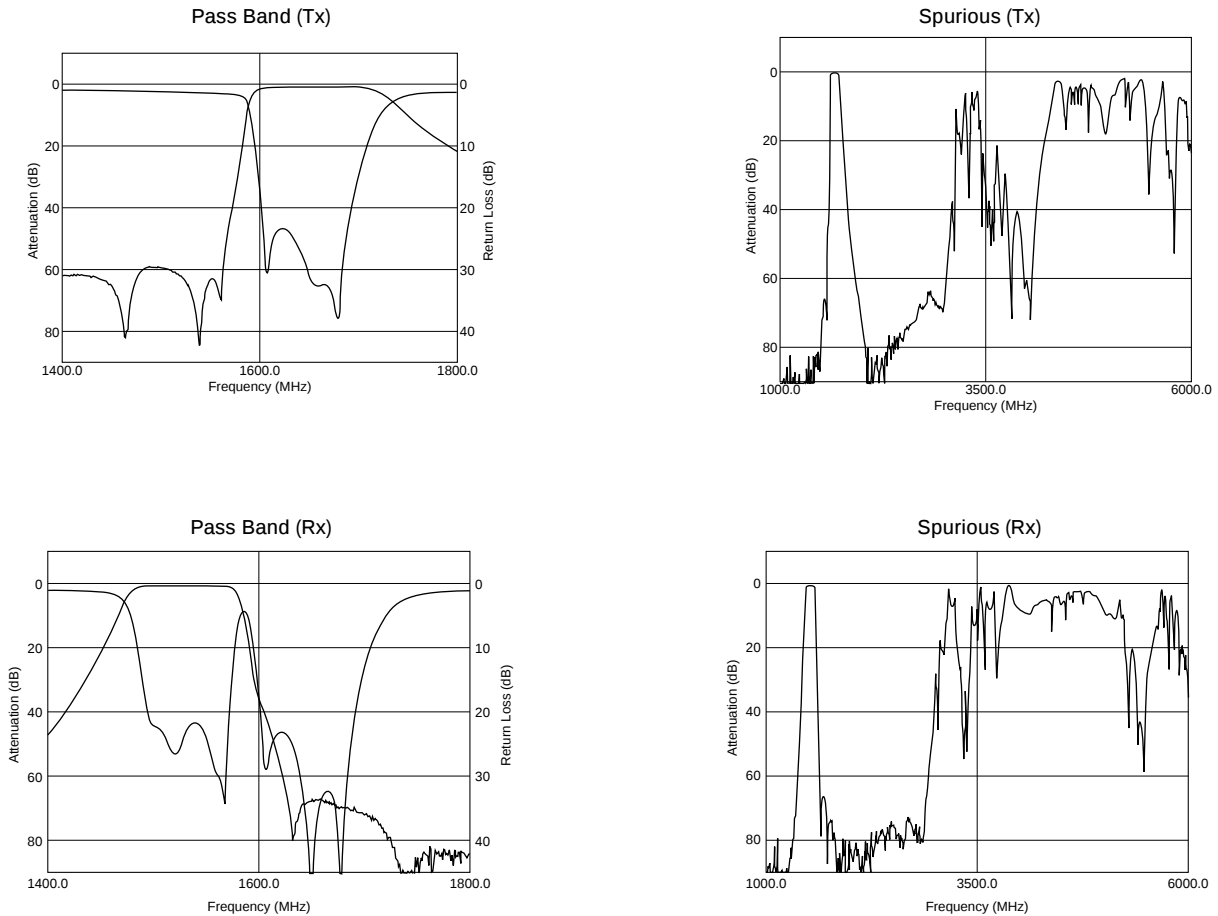
MSAT: DFYF Series

■ Features

1. Low insertion loss for using high Q-value dielectric resonators
2. Small and light for using high dielectric constant ceramics
3. Excellent temperature stability for temperature compensated dielectric constant (0+5ppm/degree C max.)
4. Excellent mechanical stability without vibratile struture



■ Characteristics



Part Number	fo (Tx) (MHz)	Bandwidth (Tx) (MHz)	IL at BW (dB max.)	Attenuation (dB min.)	fo (Rx) (MHz)	Bandwidth (Rx) (MHz)	IL at BW (dB max.)	Attenuation (dB min.)	Operation Temperature Range (°C)
DFYFB1G54THHAA	1643.5	34	1.0	60 (1525 to 1559MHz)	1542	34	1.2	65 (1626.5 to 1660.5MHz)	-30 to +85

△Note:

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- | | |
|-----------------------------|--|
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| ③ Undersea equipment | ④ Power plant equipment |
| ⑤ Medical equipment | ⑥ Transportation equipment (vehicles, trains, ships, etc.) |
| ⑦ Traffic signal equipment | ⑧ Disaster prevention / crime prevention equipment |
| ⑨ Data-processing equipment | ⑩ Application of similar complexity and/or reliability requirements to the applications listed above |

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