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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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⚠Note · Please read rating and ⚠CAUTION (for storage, operating, rating, soldering, mounting and handling) in this catalog to prevent smoking and/or burning, etc.
· This catalog has only typical specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.

EU RoHS Compliant

- All the products in this catalog comply with EU RoHS.
- EU RoHS is "the European Directive 2011/65/EU 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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● Part Numbering

CERAFIL® for FM

(Part Number)

SF	E	LF	10M7	F	A	A0	-B0
①	②	③	④	⑤	⑥	⑦	⑧

① Product ID

Product ID	
SF	Ceramic Filters

② Oscillation/Number of Elements

Code	Oscillation/Number of Elements
E	2 Elements Thickness Expander mode
T	3 Elements Thickness Expander mode
V	2 Elements Thickness Expander mode (2nd Harmonic)
K	2 Elements Thickness Expander mode (3rd Overtone)

③ Structure/Size

Code	Structure/Size
L□	Lead Type
C□	Chip Type

□ is "A" or subsequent code, which indicates the structure/size.

④ Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (Hz).
 Decimal point is expressed by capital letter "M" in case of MHz.

⑤ 3dB Bandwidth

Code	3dB Bandwidth
C	450kHz min
D	350kHz min
E	330kHz
F	280kHz
G	230kHz
H	180kHz
J	150kHz
K	110kHz
L	80kHz
M	50kHz
N	35kHz

⑥ Center Frequency/Tolerance

Code	Center Frequency	Tolerance
A	Center Frequency mentioned by specification	±30kHz
B	-30kHz shifted from center frequency of code "A"	±30kHz
C	+30kHz shifted from center frequency of code "A"	±30kHz
D	-60kHz shifted from center frequency of code "A"	±30kHz
E	+60kHz shifted from center frequency of code "A"	±30kHz
H	Center Frequency mentioned by specification	±25kHz
V	-50kHz shifted from center frequency of code "H"	±25kHz
W	+50kHz shifted from center frequency of code "H"	±25kHz
K	Center Frequency mentioned by specification	±20kHz
Z	Combination of A, B, C, D, E	—
M	Combination of A, B, C	—
F	Nominal Center Frequency	—

3dB bandwidth of "F" signifies the frequency difference (both + and -) from reference frequency, which is nominal center frequency.

⑦ Series

Code	Series
A0	Two-digit alphanumerics express series

⑧ Packaging

Code	Packaging
-B0	Bulk
-R0	Embossed Taping ø180mm
-R1	Embossed Taping ø330mm
-A0	1500pcs. /Radial Taping H ₀ =18mm
-A1	1000pcs. /Radial Taping H ₀ =18mm

Radial taping is applied to lead type and embossed taping to chip type.
 With non-standard products, two-digit alphanumerics indicating "Individual Specification" are added between "⑦Series" and "⑧Packaging."

CERAFIL®

(Part Number)

SF	S	KA	4M50	CF	00	-R1
①	②	③	④	⑤	⑥	⑦

① Product ID

Product ID	
SF	Ceramic Filters

② Oscillation/Numbers of Element

Code	Oscillation/Numbers of Element
S	2 Elements Thickness Shear mode

③ Structure/Size

Code	Structure/Size
K□	Chip Type

□ is "A" or subsequent code, which indicates the structure/size.

④ Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (Hz).
 Decimal point is expressed by capital letter "M" in case of MHz.

⑤ Product Specification Code (1)

Code	Product Specification Code (1)
BF	Tight Bandwidth Type
CF	Standard Bandwidth Type
DF	Broad Bandwidth Type
EF	Ultra-broad Bandwidth Type

⑥ Product Specification Code (2)

Code	Product Specification Code (2)
00	Standard Type

⑦ Packaging

Code	Packaging
-B0	Bulk
-R1	Embossed Taping $\phi=330\text{mm}$

With non-standard products, two-digit alphanumerics indicating "Individual Specification" is added between "⑥ Product Specification Code (2)" and "⑦ Packaging."

CERAFIL® for AM

(Part Number)

SF	P	KA	455K	D4A	-B0
①	②	③	④	⑤	⑥

① Product ID

Product ID	
SF	Ceramic Filters
CF	Ceramic Filters

② Oscillation/Numbers of Element

Code	Oscillation/Numbers of Element
P	4 Elements Area Expansion mode

③ Structure/Size

Code	Structure/Size
L□	Lead Type
C□/K□	Chip Type

□ is "A" or subsequent code, which indicates the structure/size. It varies depending on vibration mode and number of elements.

④ Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (Hz).
 Capital letter "K" following three figures expresses the unit of "kHz."

⑤ Product Specification

Code	Product Specification
D4A	Three-digit alphanumerics indicate product specification of 3dB or 6dB frequency tolerance.

□□A indicates standard type.

⑥ Packaging

Code	Packaging
-B0	Bulk
-R0	Embossed Taping ($\phi 180\text{mm}$)
-R1	Embossed Taping ($\phi 330\text{mm}$)
-M0	Magazine Cassette

Radial taping is applied to lead type and embossed taping to chip type.
 With non-standard products, three-digit alphanumerics indicating "Individual Specification" is added between "⑤ Product Specification" and "⑥ Packaging."

Ceramic Traps

(Part Number)

TP	S	KA	4M00	B	00	-R0
①	②	③	④	⑤	⑥	⑦

① Product ID

Product ID	
TP	Ceramic Traps

② Function

Code	Function
S	Single Traps

③ Structure/Size

Code	Structure/Size
K□	Chip Type

□ is "A" or subsequent code, which indicates the structure/size.

④ Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (Hz).
 Decimal point is expressed by capital letter "M" in case of MHz.

Discriminators for FM

(Part Number)

CD	A	LF	10M7	G	A	001	-B0
①	②	③	④	⑤	⑥	⑦	⑧

① Product ID

Product ID	
CD	Discriminators

② Oscillation

Code	Oscillation
A	Thickness Expander mode
S	Thickness Shear mode

③ Structure/Size

Code	Structure/Size
L□	Lead Type
C□	Chip Type

□ is "A" or subsequent code, which indicates the structure/size.

④ Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (Hz).
 Decimal point is expressed by capital letter "M" in case of MHz.

⑤ Series

Code	Series
G	Two-digit alphanumerics express series

⑤ Product Specification Code (1)

Code	Product Specification (1)
B	Broad bandwidth Type
C	Low capacitance Type

⑥ Product Specification Code (2)

Code	Product Specification (2)
00	Standard Type

⑦ Packaging

Code	Packaging
-B0	Bulk
-R1	Embossed Taping $\phi=330\text{mm}$

With non-standard products, three-digit alphanumerics indicating "Individual Specification" is added between "⑥ Product Specification Code (2)" and "⑦ Packaging."

⑥ Center Frequency/Tolerance

Code	Center Frequency	Tolerance
A	Center Frequency mentioned by specification	$\pm 30\text{kHz}$
B	-30kHz shifted from center frequency of code "A"	$\pm 30\text{kHz}$
C	+30kHz shifted from center frequency of code "A"	$\pm 30\text{kHz}$
D	-60kHz shifted from center frequency of code "A"	$\pm 30\text{kHz}$
E	+60kHz shifted from center frequency of code "A"	$\pm 30\text{kHz}$
H	Center Frequency mentioned by specification	$\pm 25\text{kHz}$
V	-50kHz shifted from center frequency of code "H"	$\pm 25\text{kHz}$
W	+50kHz shifted from center frequency of code "H"	$\pm 25\text{kHz}$
K	Center Frequency mentioned by specification	$\pm 20\text{kHz}$
Z	Combination of A, B, C, D, E	—
M	Combination of A, B, C	—
F	Nominal Center Frequency	—

3dB bandwidth of "F" signifies the frequency difference (both + and -) from reference frequency, which is nominal center frequency.

⑦ IC

Code	IC
001	Applicable IC Control Code

⑧ Packaging

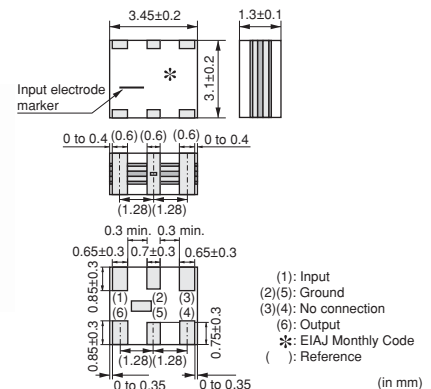
Code	Packaging
-B0	Bulk
-A0	Radial Taping $H_0=18\text{mm}$
-R0	Embossed Taping $\phi=180\text{mm}$
-R1	Embossed Taping $\phi=330\text{mm}$

Radial taping is applied to lead type and embossed taping to chip type.
 With non-standard products, an alphanumerics indicating "Individual Specification" is added between "⑦ IC" and "⑧ Packaging."

CERAFIL® (CERAFIL® 10.7MHz) for Audio/Visual Equipment

Small Chip Type SFECF Series

SFECF10M7 series for FM receivers are small, high-performance and super thin (1.4mm max.) filters. The piezoelectric element is sandwiched by the ceramic substrate. They have 1.4mm max. thickness and a small mounting area (3.45x3.1mm). SFECF series and CDSCB series (MHz Discriminator) enable customers to make VICS/RKE/TPMS set very thin and small.



■ Features

1. The filters are mountable by automatic placers.
2. They are slim, at only 1.4mm max. thickness, and have a small mounting area (3.45x3.1mm) enabling flexible PCB design.
3. Various bandwidths are available. Select a suitable type in accordance with the desired selectivity.
4. Operating Temperature Range:
 - 20 to +80°C (Standard Type)
 - 40 to +85°C (High-reliability Type)
 Storage Temperature Range:
 - 40 to +85°C (Standard Type)
 - 55 to +85°C (High-reliability Type)

Standard Type

Part Number	Center Frequency (fo) (MHz)	Nominal Center Frequency (fn) (MHz)	3dB Bandwidth (kHz)	Attenuation (kHz)	Insertion Loss (dB)	Ripple (dB)	Spurious Attenuation (1) (dB)	Spurious Attenuation (2) (dB)	Input/Output Impedance (ohm)
SFECF10M7HA00-R0	10.700 ±30kHz	-	180 ±40kHz	470 max.	4.0±2.0dB	1.0 max.	30 min. [within 9MHz to fo]	30 min. [within fo to 12MHz]	330
SFECF10M7HF00-R0	-	10.700	fn±25 min.	510 max.	8.0max. [at fn]	1.0 max.	30 min. [within 9MHz to fn]	25 min. [within fn to 12MHz]	330
SFECF10M7GA00-R0	10.700 ±30kHz	-	230 ±50kHz	510 max.	3.5±2.0dB	1.0 max.	30 min. [within 9MHz to fo]	30 min. [within fo to 12MHz]	330
SFECF10M7GF00-R0	-	10.700	fn±45 min.	560 max.	8.0max. [at fn]	1.0 max.	30 min. [within 9MHz to fn]	25 min. [within fn to 12MHz]	330
SFECF10M7FA00-R0	10.700 ±30kHz	-	280 ±50kHz	590 max.	3.0±2.0dB	1.0 max.	30 min. [within 9MHz to fo]	30 min. [within fo to 12MHz]	330
SFECF10M7FF00-R0	-	10.700	fn±65 min.	620 max.	7.0max. [at fn]	1.0 max.	30 min. [within 9MHz to fn]	25 min. [within fn to 12MHz]	330
SFECF10M7EA00-R0	10.700 ±30kHz	-	330 ±50kHz	700 max.	3.0±2.0dB	1.0 max.	30 min. [within 9MHz to fo]	30 min. [within fo to 12MHz]	330
SFECF10M7DA0001-R0	10.700 ±30kHz	-	420 min.	950 max.	3.0±2.0dB	3.0 max.	35 min. [within 9MHz to fo]	25 min. [within fo to 12MHz]	330
SFECF10M7DF00-R0	-	10.700	fn±150 min.	990 max.	6.0max. [at fn]	3.0 max.	20 min. [within 9MHz to fn]	20 min. [within fn to 12MHz]	330

Area of Attenuation: [within 20dB]

Area of Insertion Loss: at minimum loss point Area of Ripple: within 3dB B.W.

Center frequency (fo) defined by the center of 3dB bandwidth.

For safety purposes, connect the output of filters to the IF amplifier through a D.C. blocking capacitor. Avoid applying a direct current to the output of ceramic filters.

The order quantity should be an integral multiple of the "Minimum Quantity" shown in the package page.

High-Reliability Type

Part Number	Center Frequency (fo) (MHz)	Nominal Center Frequency (fn) (MHz)	3dB Bandwidth (kHz)	Attenuation (kHz)	Insertion Loss (dB)	Ripple (dB)	Spurious Attenuation (1) (dB)	Spurious Attenuation (2) (dB)	Input/Output Impedance (ohm)
SFECEF10M7HA00S0-R0	10.700 ±30kHz	-	180 ±40kHz	470 max.	4.0±2.0dB	1.0 max.	30 min. [within 9MHz to fo]	30 min. [within fo to 12MHz]	330
SFECEF10M7HF00S0-R0	-	10.700	fn±25 min.	510 max.	8.0max. [at fn]	1.0 max.	30 min. [within 9MHz to fn]	25 min. [within fn to 12MHz]	330
SFECEF10M7GA00S0-R0	10.700 ±30kHz	-	230 ±50kHz	510 max.	3.5±2.0dB	1.0 max.	30 min. [within 9MHz to fo]	30 min. [within fo to 12MHz]	330
SFECEF10M7GF00S0-R0	-	10.700	fn±45 min.	560 max.	8.0max. [at fn]	1.0 max.	30 min. [within 9MHz to fn]	25 min. [within fn to 12MHz]	330
SFECEF10M7FA00S0-R0	10.700 ±30kHz	-	280 ±50kHz	590 max.	3.0±2.0dB	1.0 max.	30 min. [within 9MHz to fo]	30 min. [within fo to 12MHz]	330
SFECEF10M7FF00S0-R0	-	10.700	fn±65 min.	630 max.	7.0max. [at fn]	1.0 max.	30 min. [within 9MHz to fn]	25 min. [within fn to 12MHz]	330
SFECEF10M7EA00S0-R0	10.700 ±30kHz	-	330 ±50kHz	700 max.	3.0±2.0dB	1.0 max.	30 min. [within 9MHz to fo]	30 min. [within fo to 12MHz]	330
SFECEF10M7DF00S0-R0	-	10.700	fn±145 min.	990 max.	6.0max. [at fn]	3.0 max.	20 min. [within 9MHz to fn]	20 min. [within fn to 12MHz]	330

Area of Attenuation: [within 20dB]

Area of Insertion Loss: at minimum loss point Area of Ripple: within 3dB B.W.

Center frequency (fo) defined by the center of 3dB bandwidth.

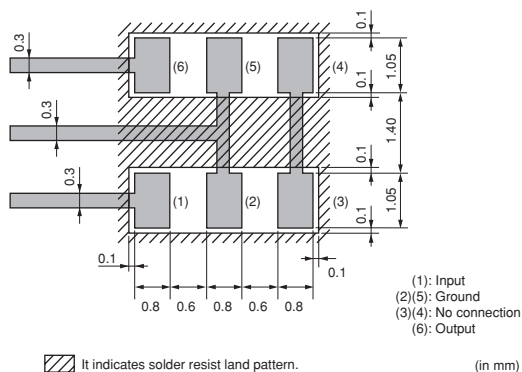
For safety purposes, connect the output of filters to the IF amplifier through a D.C. blocking capacitor. Avoid applying a direct current to the output of ceramic filters.

The order quantity should be an integral multiple of the "Minimum Quantity" shown in the package page.

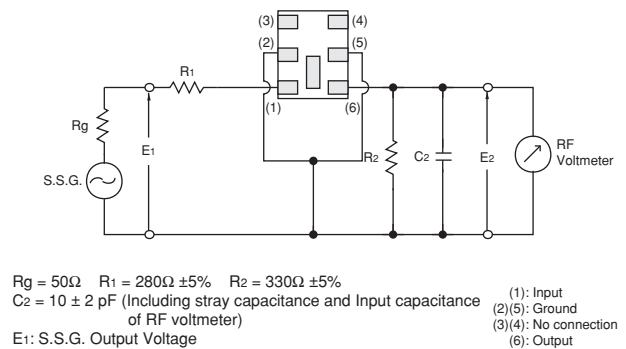
Standard Center Frequency Rank Code

CODE	30kHz Step	25kHz Step
D	10.64MHz±30kHz	10.650MHz±25kHz
B	10.67MHz±30kHz	10.675MHz±25kHz
A	10.70MHz±30kHz	10.700MHz±25kHz
C	10.73MHz±30kHz	10.725MHz±25kHz
E	10.76MHz±30kHz	10.750MHz±25kHz
Z	Combination A, B, C, D, E	
M	Combination A, B, C	

Standard Land Pattern Dimensions

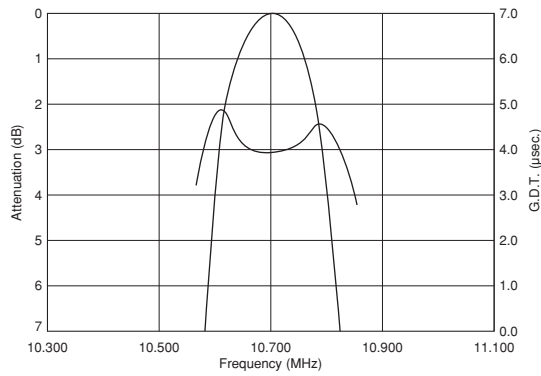


Test Circuit

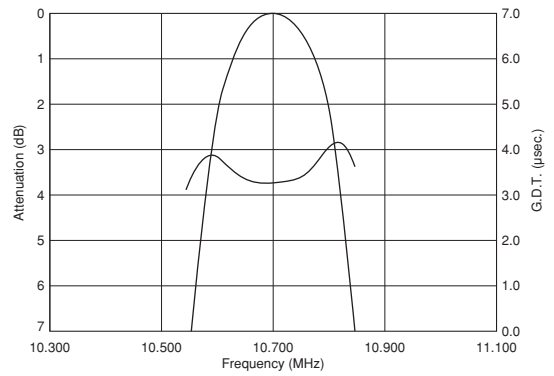


■ Frequency Characteristics Standard Type

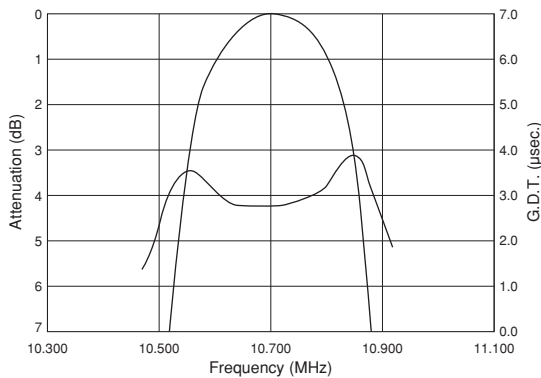
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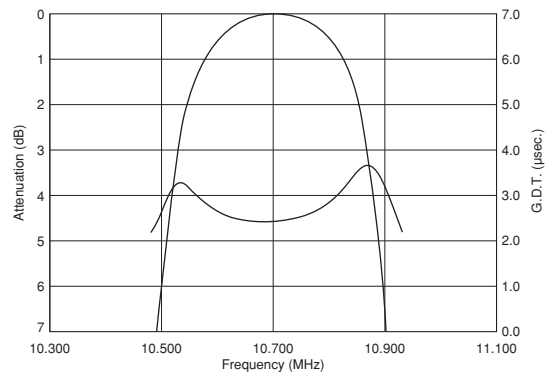
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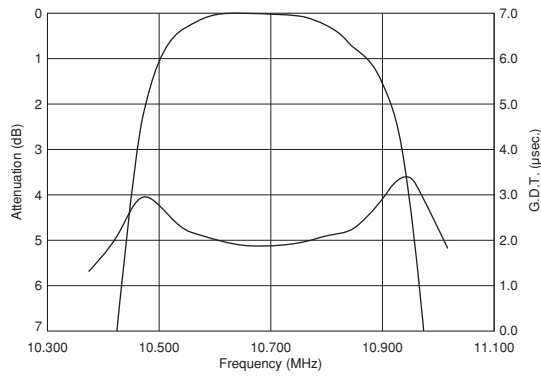
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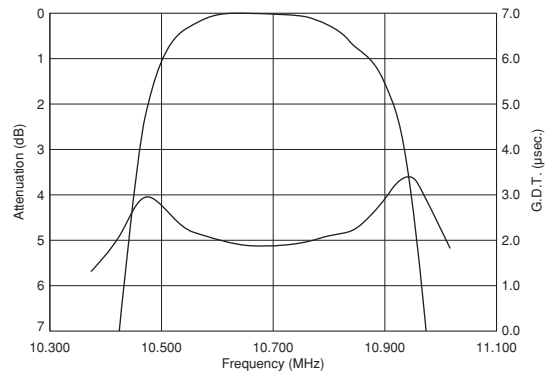
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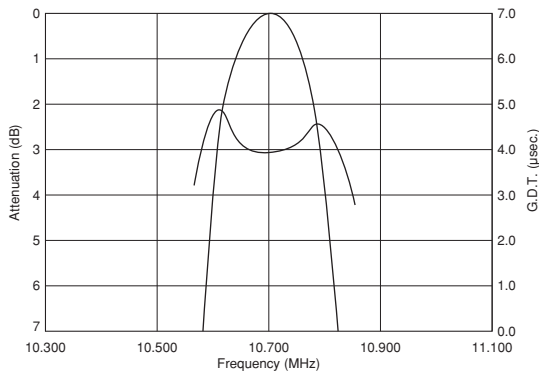


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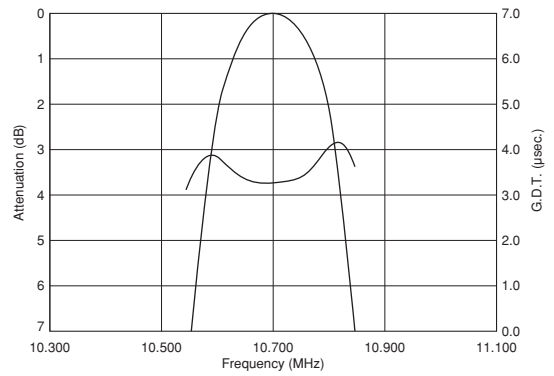


■ Frequency Characteristics High-reliability Type

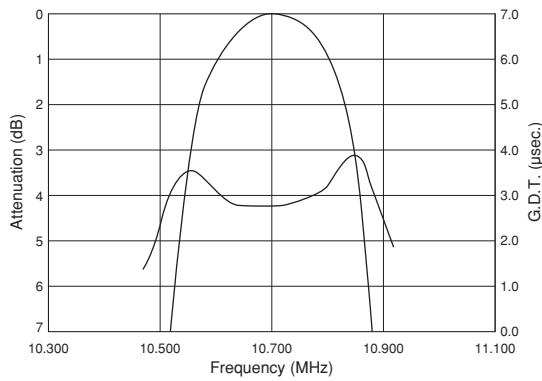
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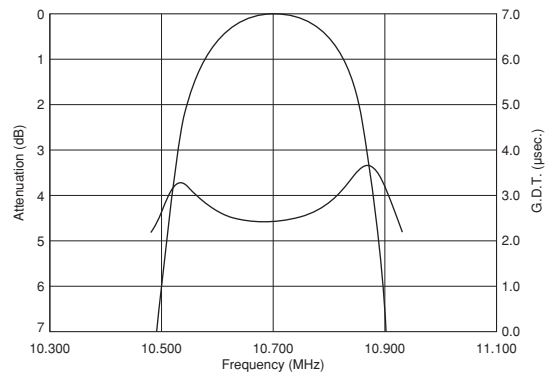
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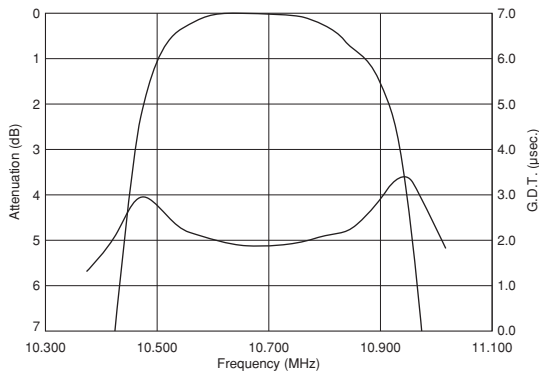
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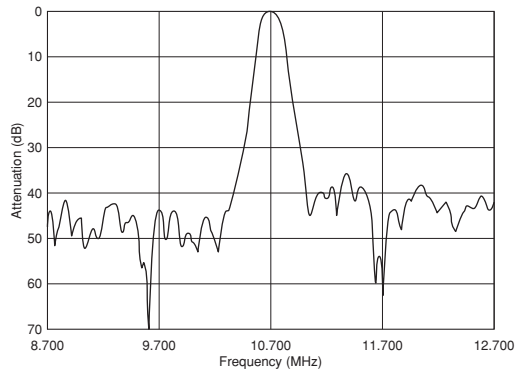


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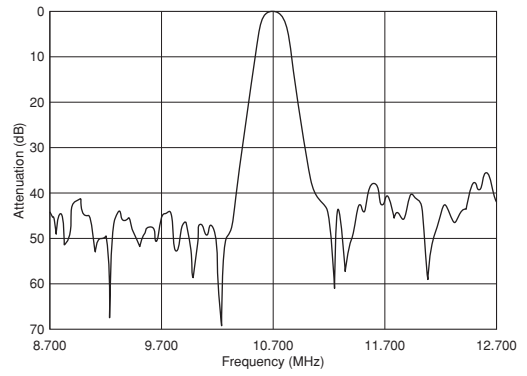


■ Frequency Characteristics (Spurious) Standard Type

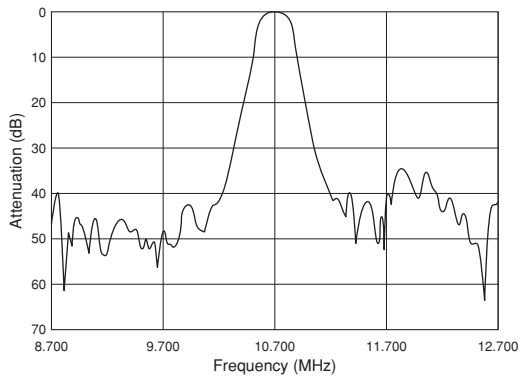
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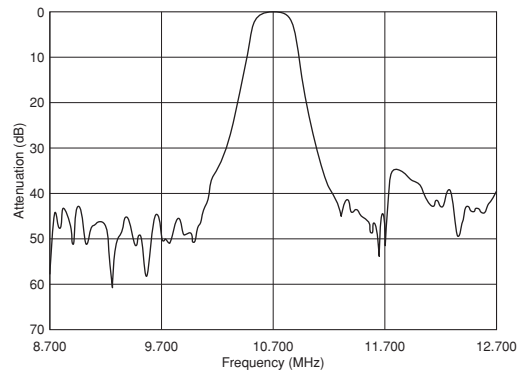
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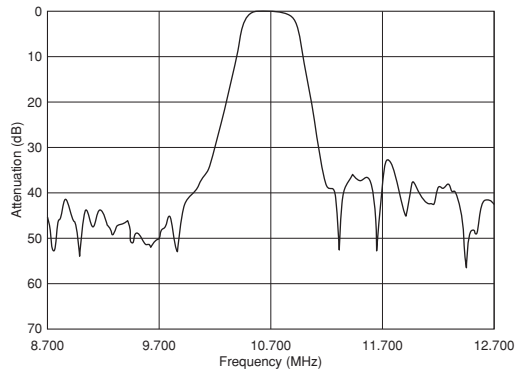
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SFECF10M7EA00-R0

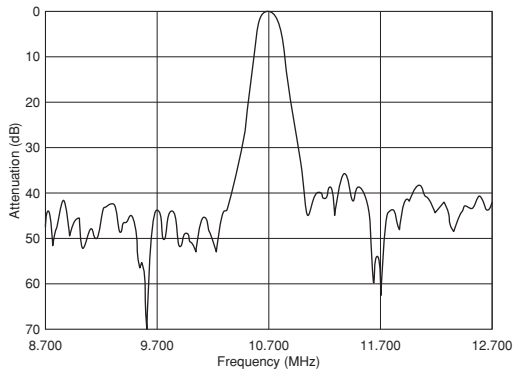


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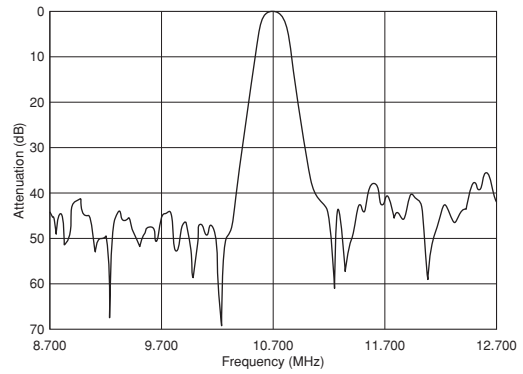


■ Frequency Characteristics (Spurious) High-reliability Type

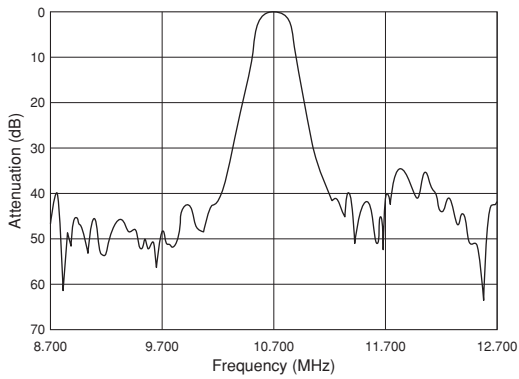
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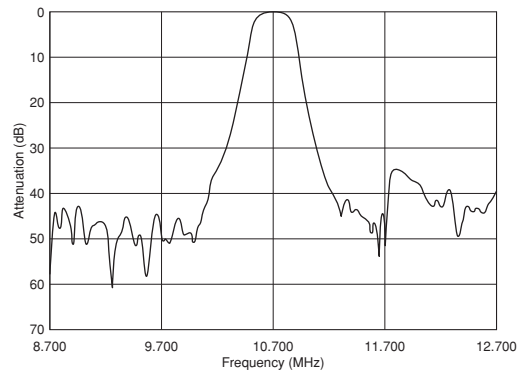
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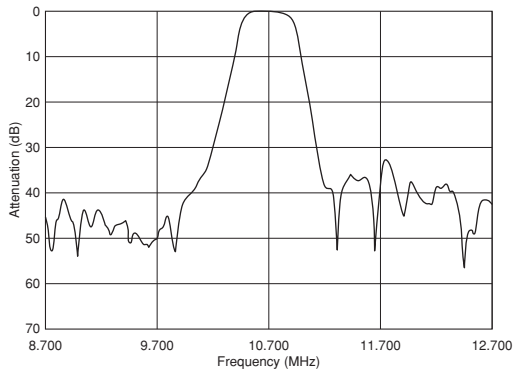
SFECF10M7FA00S0-R0/SFECF10M7FF00S0-R0



SFECF10M7EA00S0-R0



SFECF10M7DF00S0-R0



CERAFIL® (CERAFIL® 10.7MHz) for Audio/Visual Equipment

Chip Type SFECV/SFECK Series

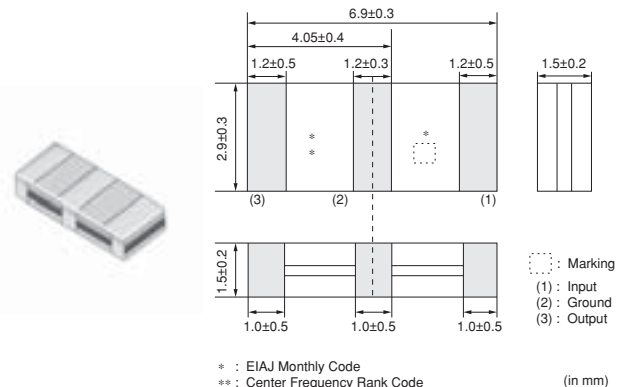
SFECV/SFECK10M7 series for FM receivers are monolithic type ceramic filters that utilize the thickness expander mode of piezoelectric ceramics. SFECV series enable customers to make an AM/FM set very thin, and it can be useful to the total chip circuit.

■ Features

1. The piezoelectric element is sandwiched by heat resistant substrate, thus it has excellent mechanical strength, and it is suitable for automatic mounting.
2. Various bandwidths are available. Select a suitable type in accordance with the desired selectivity.
3. Operating Temperature Range:
 - 20 to +80°C (Standard Type)
 - 40 to +85°C (High-reliability Type)
 Storage Temperature Range:
 - 40 to +85°C (Standard Type)
 - 55 to +85°C (High-reliability Type)

■ Applications

1. Small, thin radios
2. Automotive radios
3. Headphone stereos



Standard Type

Part Number	Center Frequency (fo) (MHz)	3dB Bandwidth (kHz)	Attenuation (kHz)	Insertion Loss (dB)	Ripple (dB)	Spurious Attenuation (1) (dB)	Spurious Attenuation (2) (dB)	Input/Output Impedance (ohm)
SFECV15M0EQ0001-R0	15.000 ±50kHz	300 min.	750 max.	7.0max.	1.0 max.	30 min. [within 14MHz to fo]	30 min. [within fo to 16MHz]	330
SFECV10M7KA00-R0	10.700 ±30kHz	110 ±30kHz	320 max.	6.0±2.0dB	1.0 max.	35 min. [within 9MHz to fo]	35 min. [within fo to 12MHz]	330
SFECV10M7JA00-R0	10.700 ±30kHz	150 ±40kHz	380 max.	5.5±2.0dB	1.0 max.	35 min. [within 9MHz to fo]	35 min. [within fo to 12MHz]	330

Area of Attenuation: [within 20dB]

Area of Insertion Loss: at minimum loss point

Center frequency (fo) defined by the center of 3dB bandwidth.

For safety purposes, connect the output of filters to the IF amplifier through a D.C. blocking capacitor. Avoid applying a direct current to the output of ceramic filters.

The order quantity should be an integral multiple of the "Minimum Quantity" shown in the package page.

High-Reliability Type

Part Number	Center Frequency (fo) (MHz)	3dB Bandwidth (kHz)	Attenuation (kHz)	Insertion Loss (dB)	Ripple (dB)	Spurious Attenuation (1) (dB)	Spurious Attenuation (2) (dB)	Input/Output Impedance (ohm)
SFECK10M7KA00S0-R0	10.700 ±30kHz	110 ±30kHz	320 max.	6.0±2.0dB	1.0 max.	35 min. [within 9MHz to fo]	35 min. [within fo to 12MHz]	330
SFECK10M7JA00S0-R0	10.700 ±30kHz	150 ±40kHz	380 max.	5.5±2.0dB	1.0 max.	35 min. [within 9MHz to fo]	35 min. [within fo to 12MHz]	330

Area of Attenuation: [within 20dB]

Area of Insertion Loss: at minimum loss point

Center frequency (fo) defined by the center of 3dB bandwidth.

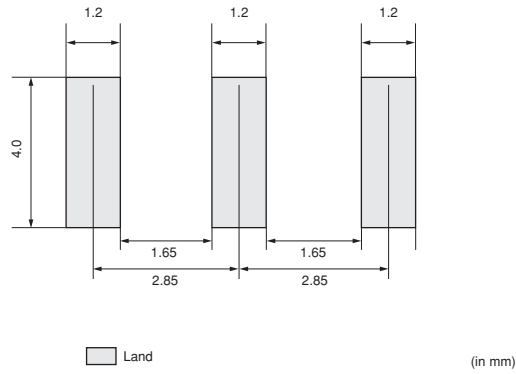
For safety purposes, connect the output of filters to the IF amplifier through a D.C. blocking capacitor. Avoid applying a direct current to the output of ceramic filters.

The order quantity should be an integral multiple of the "Minimum Quantity" shown in the package page.

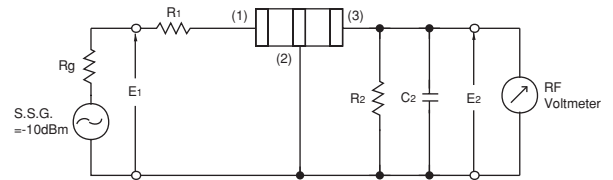
Standard Center Frequency Rank Code

CODE	30kHz Step	25kHz Step
D	10.64MHz±30kHz	10.650MHz±25kHz
B	10.67MHz±30kHz	10.675MHz±25kHz
A	10.70MHz±30kHz	10.700MHz±25kHz
C	10.73MHz±30kHz	10.725MHz±25kHz
E	10.76MHz±30kHz	10.750MHz±25kHz
Z	Combination A, B, C, D, E	
M	Combination A, B, C	

Standard Land Pattern Dimensions

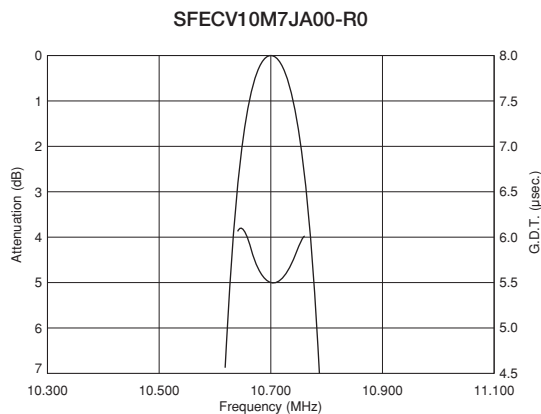
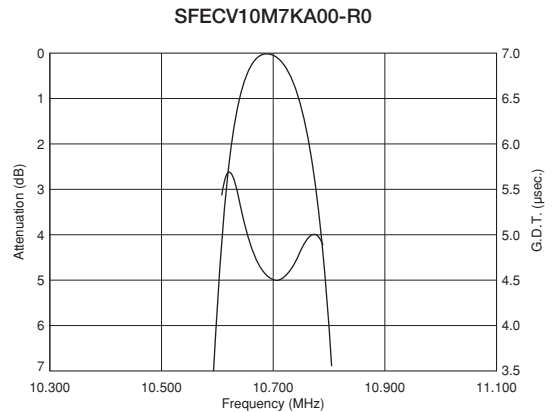
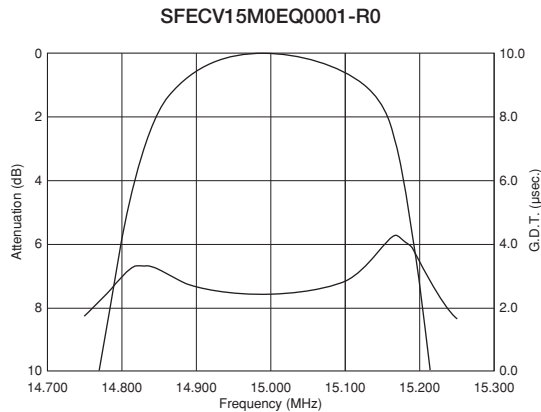


Test Circuit

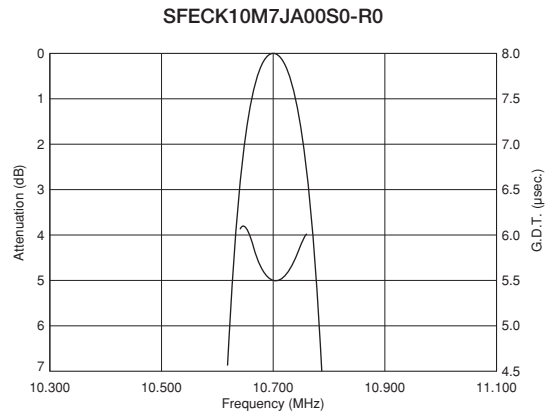
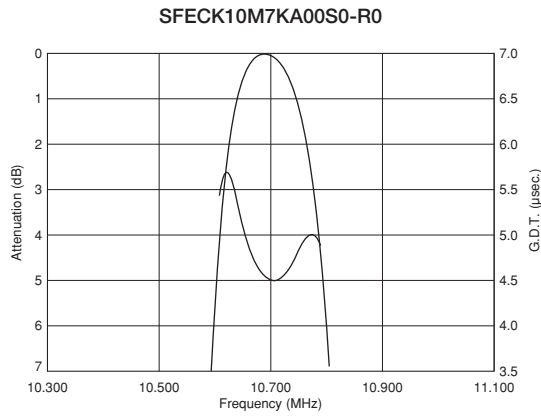


$R_g = 50\Omega$ $R_1 = 280\Omega \pm 5\%$ $R_2 = 330\Omega \pm 5\%$
 $C_2 = 10 \pm 2 \text{ pF}$ (Including stray capacitance and Input capacitance of RF voltmeter)
 E1 : S.S.G. Output Voltage
 (1) : Input
 (2) : Ground
 (3) : Output

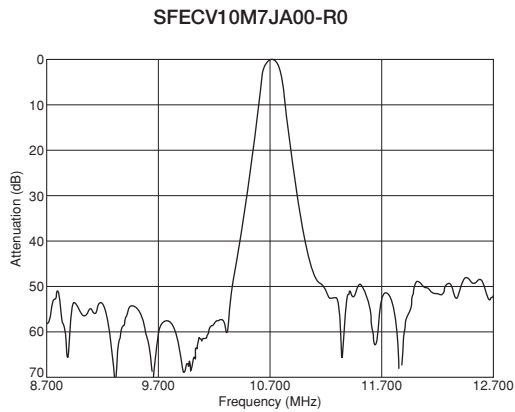
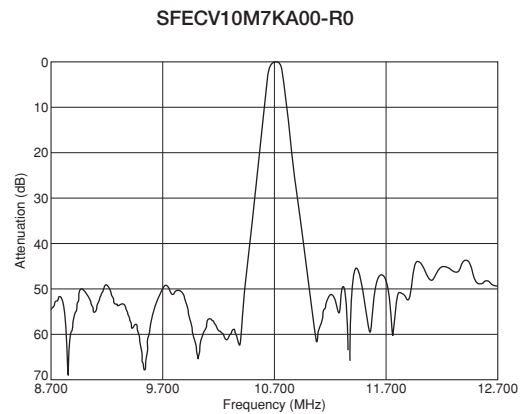
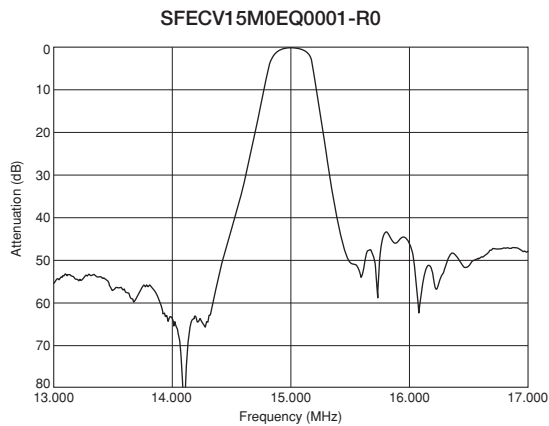
Frequency Characteristics Standard Type



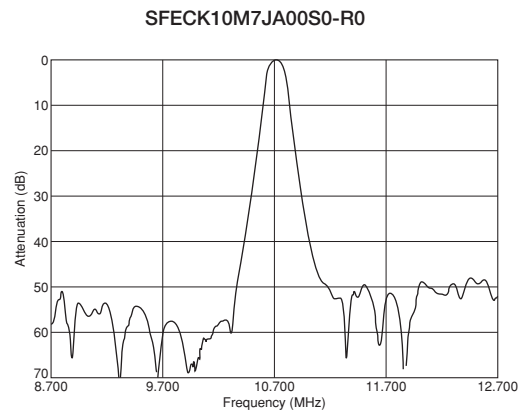
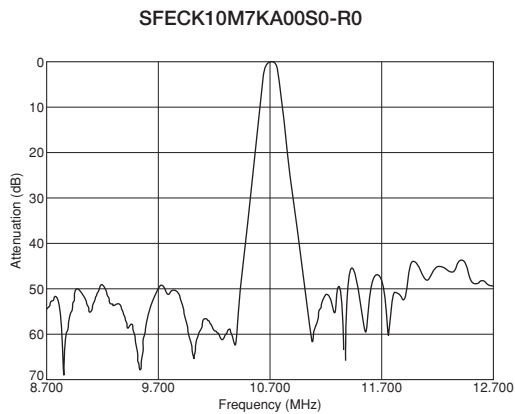
■ Frequency Characteristics High-reliability Type



■ Frequency Characteristics (Spurious) Standard Type



■ Frequency Characteristics (Spurious) High-reliability Type



CERAFIL® (CERAFIL® 10.7MHz) for Audio/Visual Equipment

Standard Lead Type SFELF Series

3

SFELF10M7 series for FM-receivers are monolithic type ceramic filters that use the thickness expander mode of the piezoelectric ceramic.

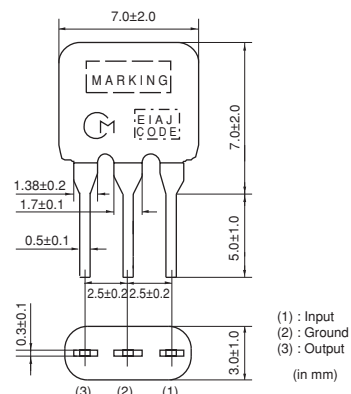
As part of the environment protection program, the solder for terminal plating and terminal-element connection inside of the ceramic filter contain no lead (Pb).

■ Features

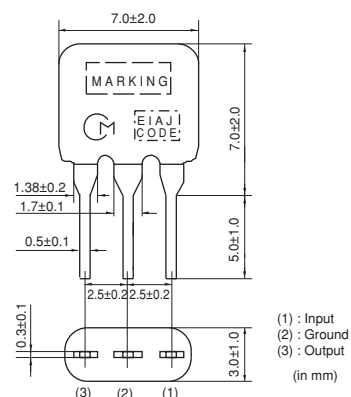
1. These miniature filters have high mechanical strength.
2. Low loss, favorable waveform symmetry, and high selectivity
3. Various bandwidths are available for applications in wide to narrow bands.
4. Small dispersion and stable characteristics
5. Change in center frequency is typically within $\pm 30\text{ppm}/^\circ\text{C}$ at -20 to $+80^\circ\text{C}$.
6. High reliability



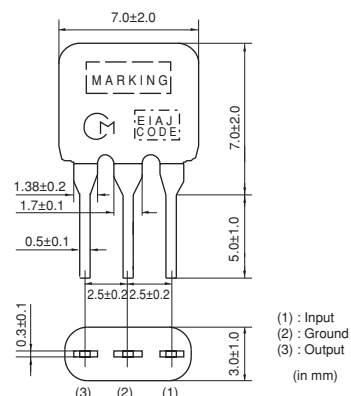
SFELF10M7HA00-B0



SFELF10M7GA00-B0



SFELF10M7FA00-B0



Part Number	Center Frequency (fo) (MHz)	3dB Bandwidth (kHz)	Attenuation (kHz)	Insertion Loss (dB)	Spurious Attenuation (1) (dB)	Spurious Attenuation (2) (dB)	Input/Output Impedance (ohm)
SFELF10M7HA00-B0	10.700 ±30kHz	180 ±40kHz	520 max.	7.0max.	40 min. [within 9MHz to fo]	40 min. [within fo to 12MHz]	330
SFELF10M7GA00-B0	10.700 ±30kHz	230 ±50kHz	570 max.	4.0±2.0dB	40 min. [within 9MHz to fo]	40 min. [within fo to 12MHz]	330
SFELF10M7FA00-B0	10.700 ±30kHz	280 ±50kHz	650 max.	4.0±2.0dB	30 min. [within 9MHz to fo]	30 min. [within fo to 12MHz]	330

Area of Attenuation: [within 20dB]

Area of Insertion Loss: at minimum loss point

Center frequency (fo) defined by the center of 3dB bandwidth.

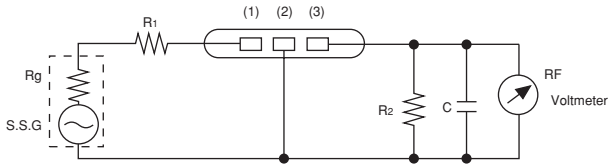
For safety purposes, connect the output of filters to the IF amplifier through a D.C. blocking capacitor. Avoid applying a direct current to the output of ceramic filters.

The order quantity should be an integral multiple of the "Minimum Quantity" shown in the package page.

Standard Center Frequency Rank Code

CODE	30kHz Step	25kHz Step	Color Code
D	10.64MHz±30kHz	10.650MHz±25kHz	Black
B	10.67MHz±30kHz	10.675MHz±25kHz	Blue
A	10.70MHz±30kHz	10.700MHz±25kHz	Red
C	10.73MHz±30kHz	10.725MHz±25kHz	Orange
E	10.76MHz±30kHz	10.750MHz±25kHz	White
Z	Combination A, B, C, D, E		
M	Combination A, B, C		

Test Circuit

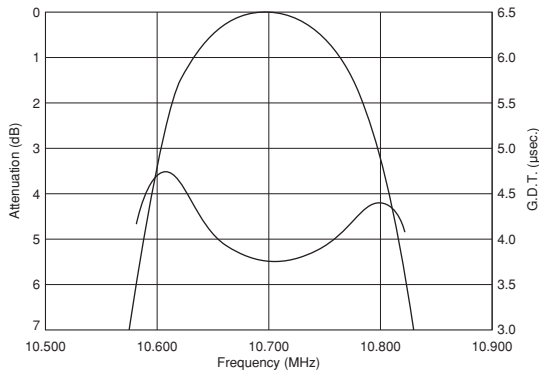


$R_g + R_1 = R_2 =$ Input and Output Impedance
 $C = 10\text{pF}$ (Including stray capacitance and input capacitance of RF voltmeter.)

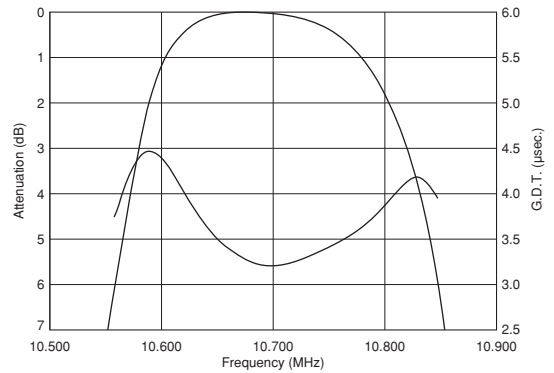
- (1) : Input
- (2) : Ground
- (3) : Output

Frequency Characteristics

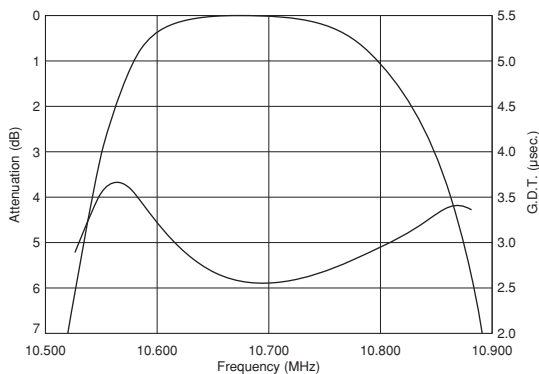
SFELF10M7HA00-B0



SFELF10M7GA00-B0

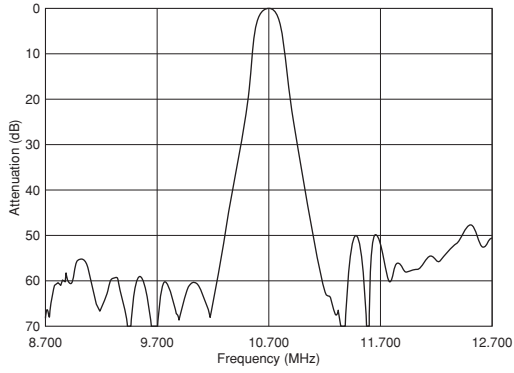


SFELF10M7FA00-B0

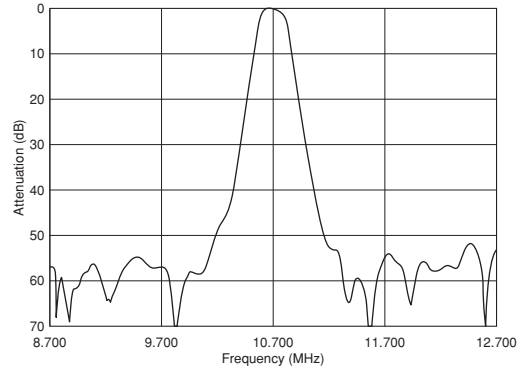


■ Frequency Characteristics (Spurious)

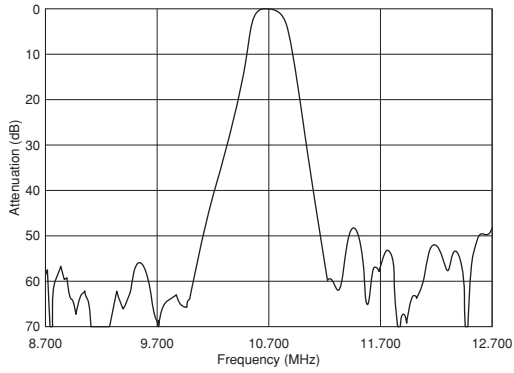
SFELF10M7HA00-B0



SFELF10M7GA00-B0



SFELF10M7FA00-B0



3

CERAFIL® (CERAFIL® 10.7MHz) for Audio/Visual Equipment

Low Loss Type SFELF Series

SFELF10M7 series for FM receivers are monolithic type ceramic filters that use the thickness expander mode of the piezoelectric ceramic.

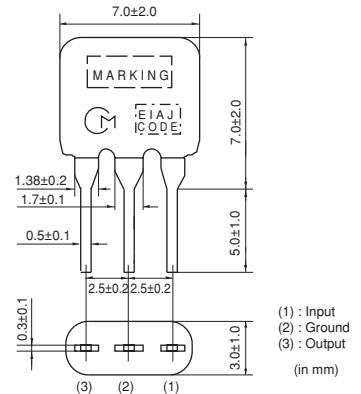
As part of the environment protection program, the solder for terminal plating and terminal-element connection inside of the ceramic filter contain no lead (Pb).

■ Features

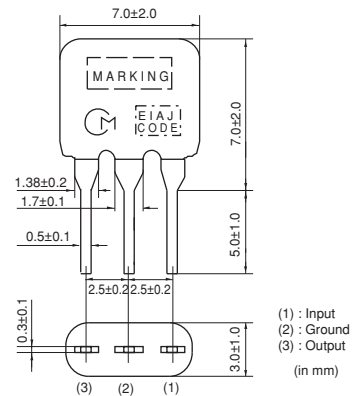
1. Insertion loss is 1 to 1.5dB lower than conventional products. These types are useful for elevating the sensitivity of sets.
2. Small dispersion and stable characteristics
3. Excellent shape factor of frequency response
4. Good waveform symmetry



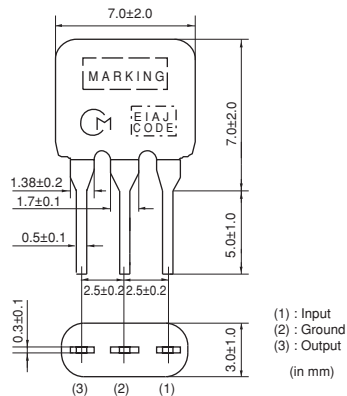
SFELF10M7JAA0-B0



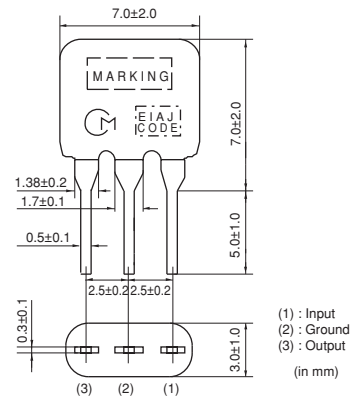
SFELF10M7HAA0-B0



SFELF10M7GAA0-B0



SFELF10M7FAA0-B0



Part Number	Center Frequency (fo) (MHz)	3dB Bandwidth (kHz)	Attenuation (kHz)	Insertion Loss (dB)	Spurious Attenuation (1) (dB)	Spurious Attenuation (2) (dB)	Input/Output Impedance (ohm)
SFELF10M7JAA0-B0	10.700 ±30kHz	150 ±40kHz	360 max.	4.5±2.0dB	35 min. [within 9MHz to fo]	35 min. [within fo to 12MHz]	330
SFELF10M7HAA0-B0	10.700 ±30kHz	180 ±40kHz	470 max.	3.5±1.5dB	35 min. [within 9MHz to fo]	35 min. [within fo to 12MHz]	330
SFELF10M7GAA0-B0	10.700 ±30kHz	230 ±50kHz	520 max.	3.0±2.0dB	35 min. [within 9MHz to fo]	35 min. [within fo to 12MHz]	330
SFELF10M7FAA0-B0	10.700 ±30kHz	280 ±50kHz	590 max.	2.5±2.0dB	30 min. [within 9MHz to fo]	30 min. [within fo to 12MHz]	330

Area of Attenuation: [within 20dB]

Area of Insertion Loss: at minimum loss point

Center frequency (fo) defined by the center of 3dB bandwidth.

For safety purposes, connect the output of filters to the IF amplifier through a D.C. blocking capacitor. Avoid applying a direct current to the output of ceramic filters.

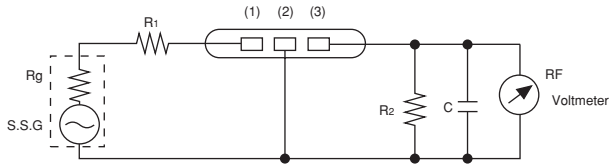
The order quantity should be an integral multiple of the "Minimum Quantity" shown in the package page.

Standard Center Frequency Rank Code

CODE	30kHz Step	25kHz Step	Color Code
D	10.64MHz±30kHz	10.650MHz±25kHz	Black
B	10.67MHz±30kHz	10.675MHz±25kHz	Blue
A	10.70MHz±30kHz	10.700MHz±25kHz	Red
C	10.73MHz±30kHz	10.725MHz±25kHz	Orange
E	10.76MHz±30kHz	10.750MHz±25kHz	White
Z	Combination A, B, C, D, E		
M	Combination A, B, C		

Test Circuit

4

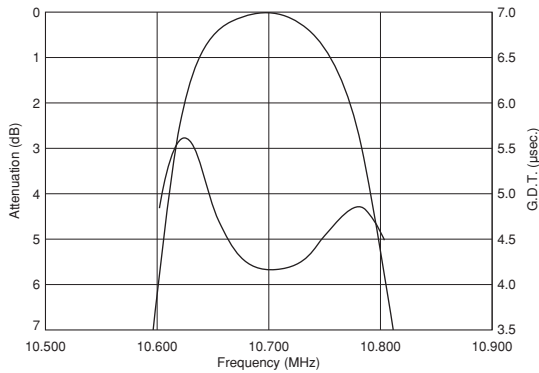


$R_g + R_1 = R_2 =$ Input and Output Impedance
 $C = 10\text{pF}$ (Including stray capacitance and input capacitance of RF voltmeter.)

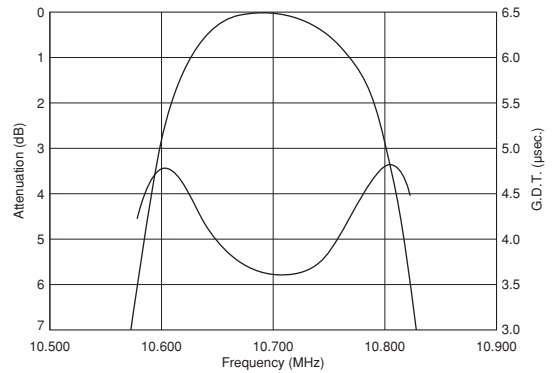
(1) : Input
 (2) : Ground
 (3) : Output

Frequency Characteristics

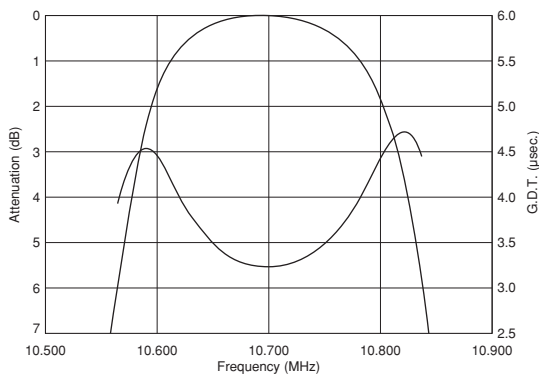
SFELF10M7JAA0-B0



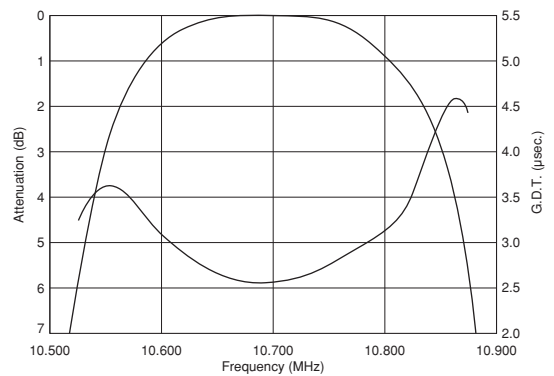
SFELF10M7HAA0-B0



SFELF10M7GAA0-B0

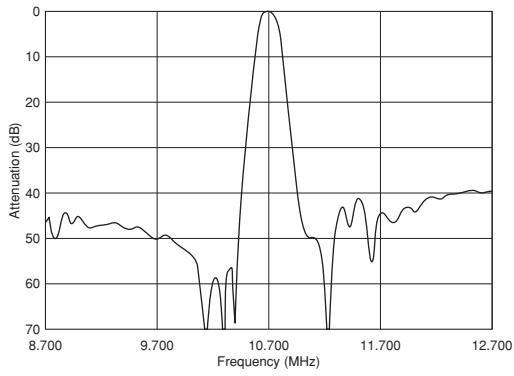


SFELF10M7FAA0-B0

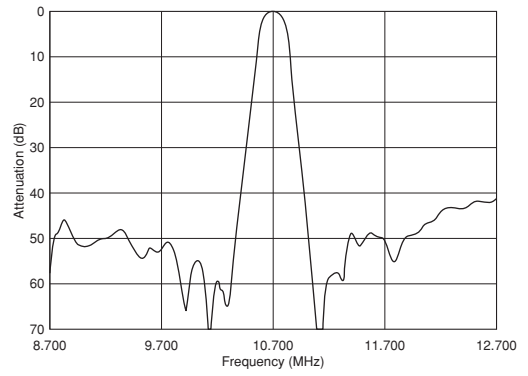


■ Frequency Characteristics (Spurious)

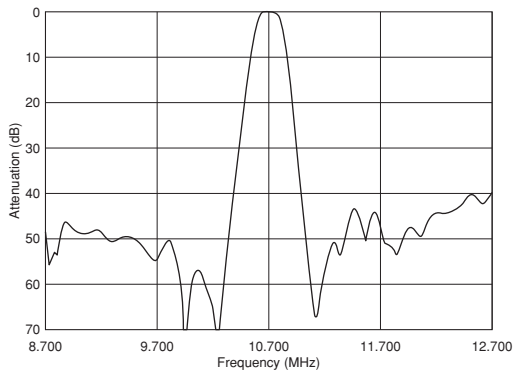
SFELF10M7JAA0-B0



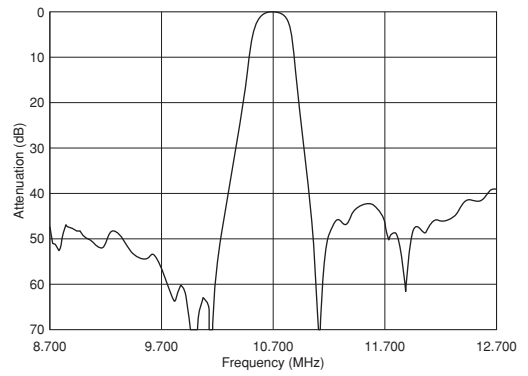
SFELF10M7HAA0-B0



SFELF10M7GAA0-B0



SFELF10M7FAA0-B0



CERAFIL® (CERAFIL® 10.7MHz) for Audio/Visual Equipment

Low Spurious Response Type SFELF Series

SFELF10M7 series for FM-receivers are monolithic type ceramic filters that use the thickness expander mode of the piezoelectric ceramic.

As part of the environment protection program, the solder for terminal plating and terminal-element connection inside of the ceramic filter contain no lead (Pb).

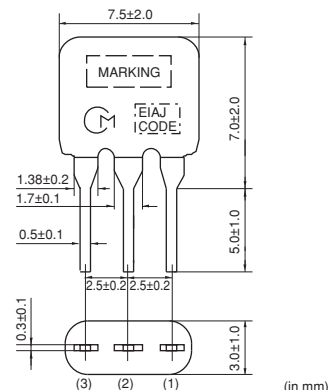
■ Features

These types have lower spurious response compared to standard filters.

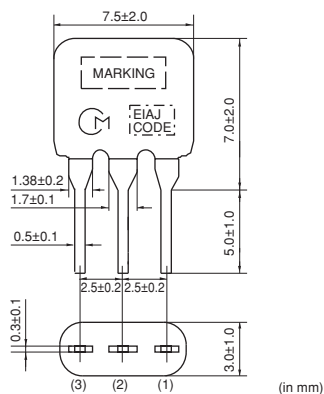
5



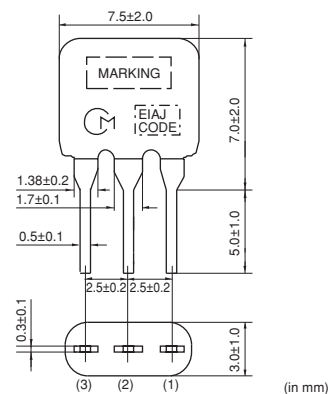
SFELF10M7KAB0-B0



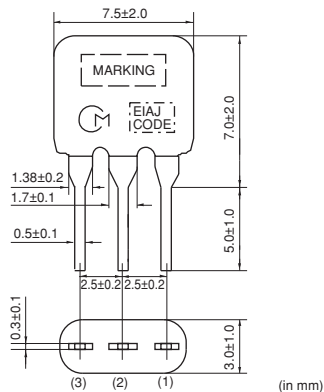
SFELF10M7JAB0-B0



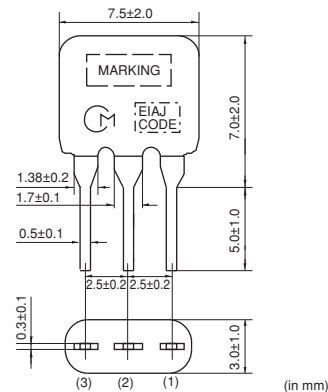
SFELF10M7HAB0-B0



SFELF10M7GAB0-B0



SFELF10M7FAB0-B0



Part Number	Center Frequency (fo) (MHz)	3dB Bandwidth (kHz)	Attenuation (kHz)	Insertion Loss (dB)	Spurious Attenuation (1) (dB)	Spurious Attenuation (2) (dB)	Input/Output Impedance (ohm)
SFELF10M7KAB0-B0	10.700 ±30kHz	110 ±30kHz	350 max.	7.0±2.0dB	45/30 min. [within 9MHz to fo]	30 min. [within fo to 12MHz]	330
SFELF10M7JAB0-B0	10.700 ±30kHz	150 ±40kHz	380 max.	5.5±2.0dB	45 min. [within 9MHz to fo]	45 min. [within fo to 12MHz]	330
SFELF10M7HAB0-B0	10.700 ±30kHz	180 ±40kHz	520 max.	5.0±2.0dB	45 min. [within 9MHz to fo]	45 min. [within fo to 12MHz]	330
SFELF10M7GAB0-B0	10.700 ±30kHz	230 ±50kHz	570 max.	3.0±2.0dB	45 min. [within 9MHz to fo]	45 min. [within fo to 12MHz]	330

Continued on the following page. ↗

⚠Note • Please read rating and ⚠CAUTION (for storage, operating, rating, soldering, mounting and handling) in this catalog to prevent smoking and/or burning, etc.
 • This catalog has only typical specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.

Continued from the preceding page.

Part Number	Center Frequency (fo) (MHz)	3dB Bandwidth (kHz)	Attenuation (kHz)	Insertion Loss (dB)	Spurious Attenuation (1) (dB)	Spurious Attenuation (2) (dB)	Input/Output Impedance (ohm)
SFELF10M7FAB0-B0	10.700 ±30kHz	280 ±50kHz	650 max.	3.0±2.0dB	45 min. [within 9MHz to fo]	45 min. [within fo to 12MHz]	330

Area of Attenuation: [within 20dB]

Area of Insertion Loss: at minimum loss point

Center frequency (fo) defined by the center of 3dB bandwidth.

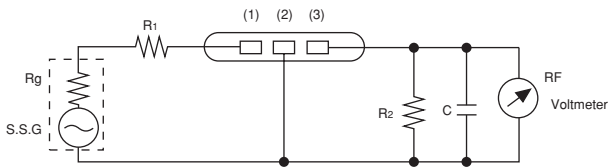
For safety purposes, connect the output of filters to the IF amplifier through a D.C. blocking capacitor. Avoid applying a direct current to the output of ceramic filters.

The order quantity should be an integral multiple of the "Minimum Quantity" shown in the package page.

Standard Center Frequency Rank Code

CODE	30kHz Step	25kHz Step	Color Code
D	10.64MHz±30kHz	10.650MHz±25kHz	Black
B	10.67MHz±30kHz	10.675MHz±25kHz	Blue
A	10.70MHz±30kHz	10.700MHz±25kHz	Red
C	10.73MHz±30kHz	10.725MHz±25kHz	Orange
E	10.76MHz±30kHz	10.750MHz±25kHz	White
Z	Combination A, B, C, D, E		
M	Combination A, B, C		

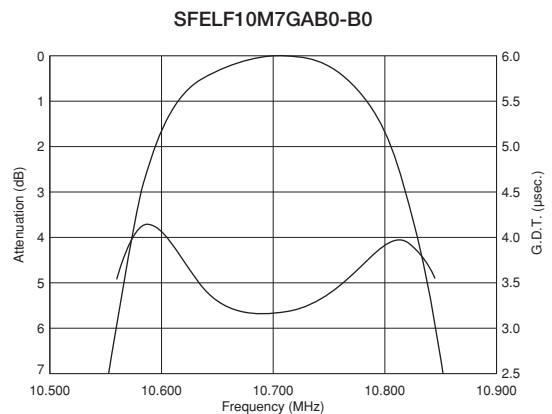
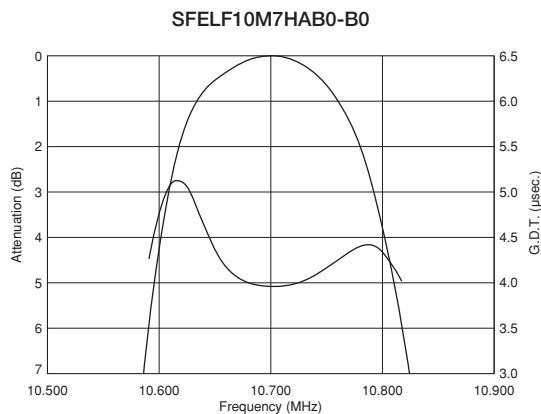
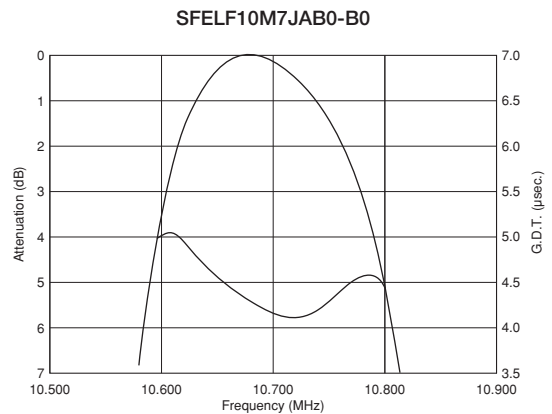
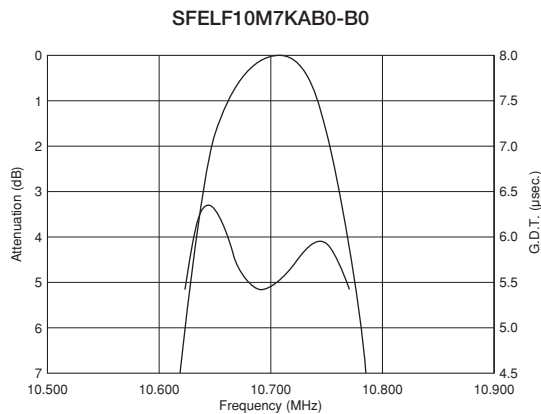
Test Circuit



$R_g + R_1 = R_2 =$ Input and Output Impedance
 $C = 10\text{pF}$ (Including stray capacitance and input capacitance of RF voltmeter.)

- (1) : Input
- (2) : Ground
- (3) : Output

Frequency Characteristics

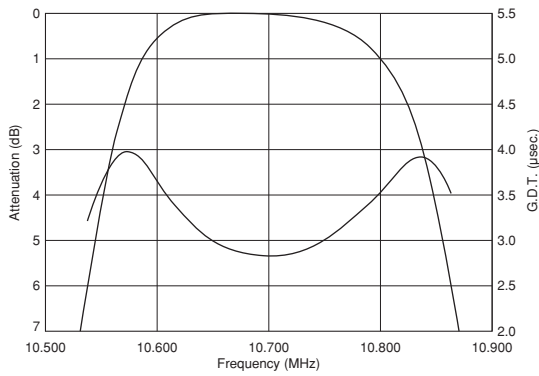


Continued on the following page. ↗

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■ Frequency Characteristics

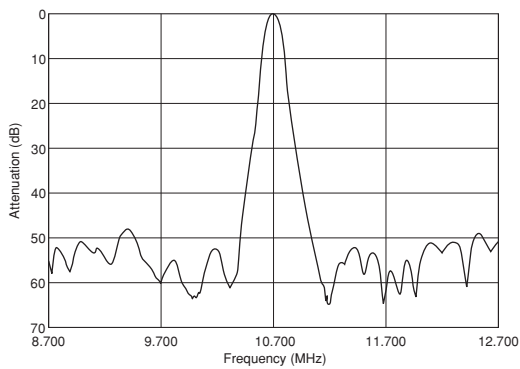
SFELF10M7FAB0-B0



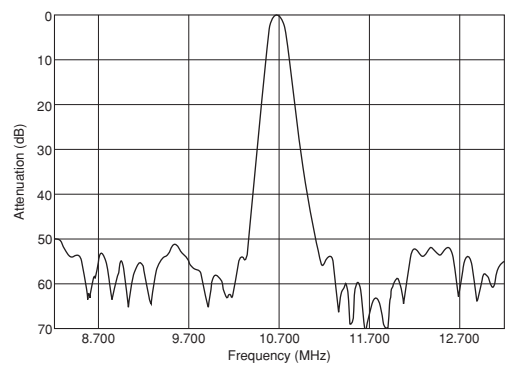
5

■ Frequency Characteristics (Spurious)

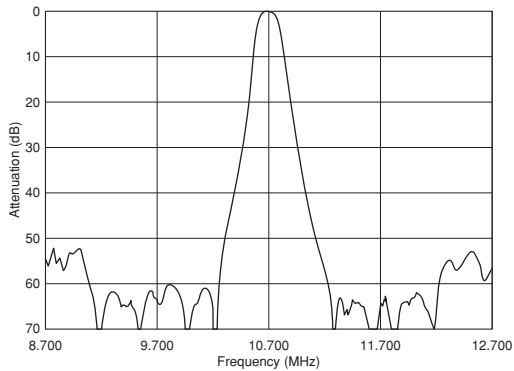
SFELF10M7KAB0-B0



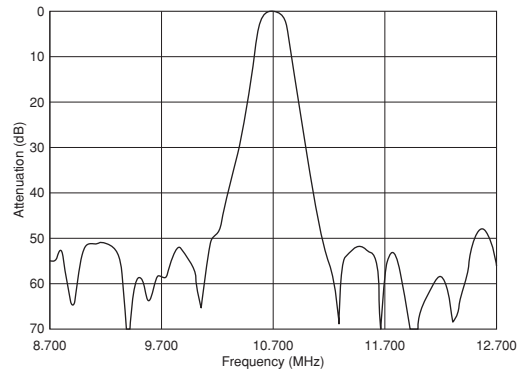
SFELF10M7JAB0-B0



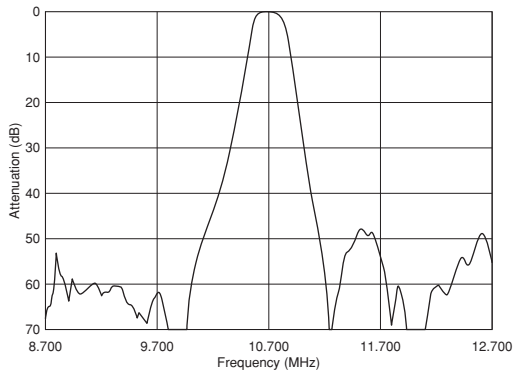
SFELF10M7HAB0-B0



SFELF10M7GAB0-B0



SFELF10M7FAB0-B0



CERAFIL® (CERAFIL® 10.7MHz) for Audio/Visual Equipment

Wide Bandwidth Type SFELF Series

SFELF10M7 series for FM-receivers are monolithic type ceramic filters that use the thickness expander mode of the piezoelectric ceramic.

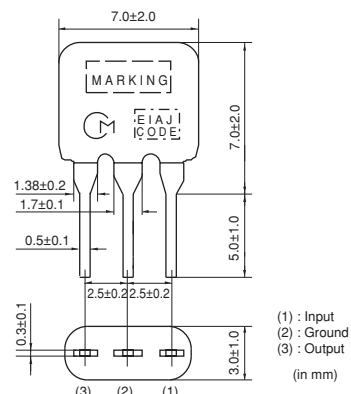
As part of the environment protection program, the solder for terminal plating and terminal-element connection inside of the ceramic filter contain no lead (Pb).

■ Features

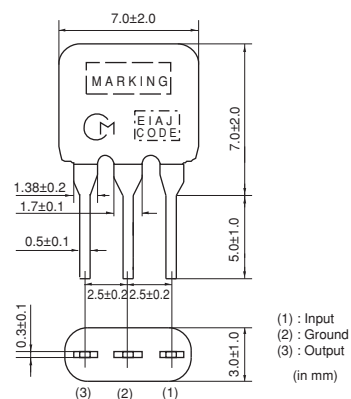
Realizes wider band characteristics not obtained by conventional ceramic filters.



SFELF10M7EA00-B0



SFELF10M7DF00-B0



Part Number	Center Frequency (fo) (MHz)	Nominal Center Frequency (fn) (MHz)	3dB Bandwidth (kHz)	Attenuation (kHz)	Insertion Loss (dB)	Spurious Attenuation (1) (dB)	Spurious Attenuation (2) (dB)	Input/Output Impedance (ohm)
SFELF10M7EA00-B0	10.700 ±30kHz	-	330 ±50kHz	680 max.	4.0±2.0dB	30 min. [within 9MHz to fo]	30 min. [within fo to 12MHz]	330
SFELF10M7DF00-B0	-	10.700	fn±175 min.	950 max.	3.0±2.0dB	20 min. [within 5MHz to fn]	20 min. [within fn to 15MHz]	470

Area of Attenuation: [within 20dB]

Area of Insertion Loss: at minimum loss point

Center frequency (fo) defined by the center of 3dB bandwidth.

For safety purposes, connect the output of filters to the IF amplifier through a D.C. blocking capacitor. Avoid applying a direct current to the output of ceramic filters.

The order quantity should be an integral multiple of the "Minimum Quantity" shown in the package page.

■ Standard Center Frequency Rank Code (SFELF10M7EA00-B0)

CODE	30kHz Step	25kHz Step	Color Code
D	10.64MHz±30kHz	10.650MHz±25kHz	Black
B	10.67MHz±30kHz	10.675MHz±25kHz	Blue
A	10.70MHz±30kHz	10.700MHz±25kHz	Red
C	10.73MHz±30kHz	10.725MHz±25kHz	Orange
E	10.76MHz±30kHz	10.750MHz±25kHz	White
Z	Combination A, B, C, D, E		
M	Combination A, B, C		