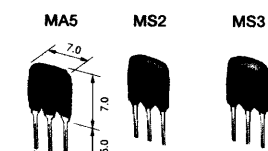


FILTERS FOR AUDIO VISUAL EQUIPMENT

CERAMIC FILTERS (CERAFIL®) FOR FM

CERAFIL® FOR FM

For FM-IF, 10.7MHz



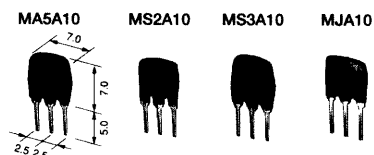
(in mm)

Part Number	3dB Bandwidth (kHz)	20dB Bandwidth (kHz) max.	Insertion Loss (dB) max.	Spurious (9-12MHz)(dB) min.
SFE10.7MA5	280±50	650(520)	6(4)	30(43)
SFE10.7MS2	230±50	600(420)	6(4)	40(45)
SFE10.7MS3	180±40	520(380)	7(4.5)	40(45)

• Input/output impedance: 330Ω

(): Typ. values

Low-Loss Type A10 Series, 10.7MHz



(in mm)

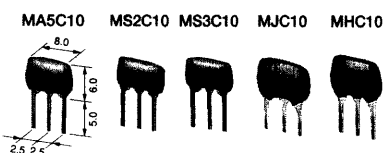
Part Number	3dB Bandwidth (kHz)	20dB Bandwidth (kHz) max.	Insertion Loss (dB) max.	Spurious (9-12MHz)(dB) min.
SFE10.7MA5A10	280±50	590(480)	2.5±2.0	30(42)
SFE10.7MS2A10	230±40	520(410)	3.0±2.0	35(42)
SFE10.7MS3A10	180±40	470(370)	3.5±1.5	35(42)
SFE10.7MJA10	150±40	360(300)	4.5±2.0	35(42)

• Input/output impedance: 330Ω

• Low loss and high selectivity.

(): Typ. values

Low-Profile C10 Series, 10.7MHz



(in mm)

Part Number	3dB Bandwidth (kHz)	20dB Bandwidth (kHz) max.	Insertion Loss (dB) max.	Spurious (9-12MHz)(dB) min.
SFE10.7MA5C10	280±50	650(540)	3.0±2.0	30(47)
SFE10.7MS2C10	230±50	570(470)	3.0±2.0	40(49)
SFE10.7MS3C10	180±40	470(360)	3.5±2.0	35(47)
SFE10.7MJC10	150±40	360(300)	4.5±2.0	35(42)
SFE10.7MHC10	110±30	350(260)	7.0±2.0	30(38)

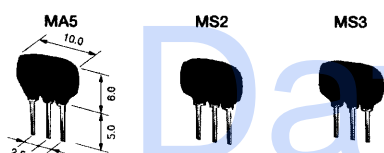
• Input/output impedance: 330Ω

• Most suitable for a thin type and low profile set.

• The performance is the same as that of conventional types.

(): Typ. values

Three-element SFT Series, 10.7MHz



(in mm)

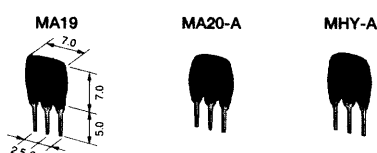
Part Number	3dB Bandwidth (kHz)	40dB Bandwidth (kHz) max.	Insertion Loss (dB) max.	Spurious (9-12MHz)(dB) min.
SFT10.7MA5	280±50	700(630)	6±2	50(60)
SFT10.7MS2	230±40	650(580)	6±2	50(60)
SFT10.7MS3	180±40	550(500)	8±2	50(60)

• Input/output impedance: 330Ω

• High selectivity is achieved by replacing with SFE10.7 series.

(): Typ. values

For DBS Receiver, 10.7MHz



(in mm)

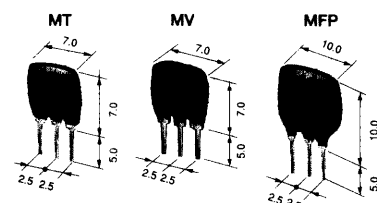
Part Number	3dB Bandwidth (kHz)	20dB Bandwidth (kHz) max.	Insertion Loss (dB) max.	Spurious (9-12MHz)(dB) min.
SFE10.7MA19	350 min. (450)	950(750)	3±2	20(30)
SFE10.7MA20-A	330±50	680(615)	4±2	30(40)
SFE10.7MHY-A	110±30	350(260)	7±2	30(38)

• Input/output impedance: 330Ω (MA20-A, MHY-A), 470Ω (MA19)

• Center frequency 10.52MHz type of SFE10.7MHY-A is also available.

(): Typ. values

Narrow-Band Type, 10.7MHz



(in mm)

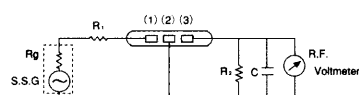
Part Number	3dB Bandwidth (kHz) min.	20dB Bandwidth (kHz) max.	Insertion Loss (dB) max.	Spurious (9-12MHz)(dB) min.
SFE10.7MT	±25(80)	200(160)	6.5±2.5	30(55)
SFE10.7MV	±13(53)	135(109)	6.0±2.0	30(50)
SFE10.7MFP	20(38)	95(78)	6.0max.(3.4)	24(28)

• Input/output impedance: 330 (MT, MV), 800Ω (MFP)

• Spurious range of SFE10.7MFP: 10.7±1MHz.

(): Typ. values

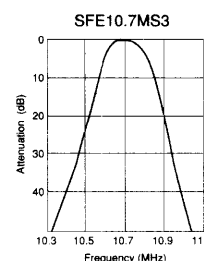
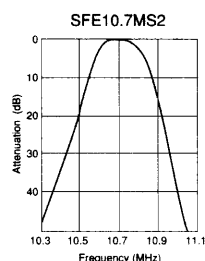
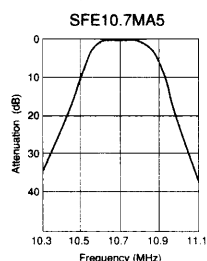
SFE10.7/SFT10.7 Series Test Circuit



$R_g + R_1 = 330\Omega$

$C = 10pF$ (Including stray capacitance and input capacitance of RF voltmeter.)

Frequency Characteristics



Minimum Quantity (order in sets only) : 500 pcs.

EMI SUPPRESSION FILTERS (EMIFIL®)

MICROWAVE COMPONENTS

FILTERS

VIDEO EQUIPMENT

FUNCTIONAL MODULES HYBRID ICs

POWER SUPPLIES

SENSORS

CAPACITORS

THERMISTORS /RESISTORS

COILS/DIODES /FERRITE CORES

RESONATORS

PIEZO PRODUCTS

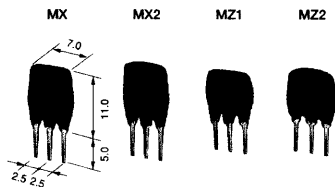
FILTERS FOR AUDIO VISUAL EQUIPMENT

CERAMIC FILTERS (CERAFIL®) FOR FM

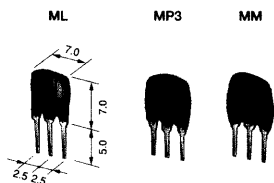
CERAFIL FOR FM

FM-IF Tuners, 10.7MHz

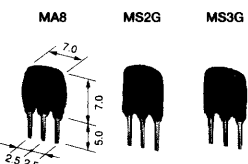
MX Series



ML Series

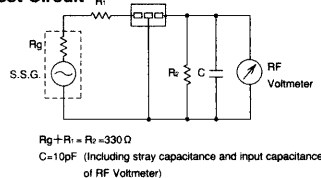


MA/MS Series



(in mm)

Test Circuit



Part Number	3dB Bandwidth (kHz)	20dB Bandwidth (kHz) max.	Insertion Loss (dB) max.	Spurious (9-12MHz) (dB) min.	G.D.T Bandwidth (kHz) min.
SFE10.7MX	250±40	670(620)	12(10)	25(33)	0.2 μ sec. fo±110kHz
SFE10.7MX2	220±40	610(560)	12.5(10.5)	30(37)	0.15 μ sec. fo±80kHz
SFE10.7MZ1	180±30	530(460)	14(12.3)	33(38)	0.15 μ sec. fo±60kHz
SFE10.7MZ2	150±30	500(420)	14(12.6)	35(41)	0.15 μ sec. fo±50kHz
SFE10.7ML	280±50	700(610)	9(7)	25(33)	0.25 μ sec. fo±70(±105)
SFE10.7MP3	250±40	650(550)	10(8)	30(35)	0.25 μ sec. fo±65(±90)
SFE10.7MM	230±50	600(510)	11(9)	30(38)	0.25 μ sec. fo±60(±85)
SFE10.7MA8	280±50	650(520)	6(4)	30(43)	0.5 μ sec. fo±80(±100)
SFE10.7MS2G	230±50	600(420)	7(4.5)	40(45)	0.5 μ sec. fo±60(±75)
SFE10.7MS3G	180±40	520(380)	7(5)	40(45)	0.5 μ sec. fo±45(±60)

• Input/Output impedance: 330Ω

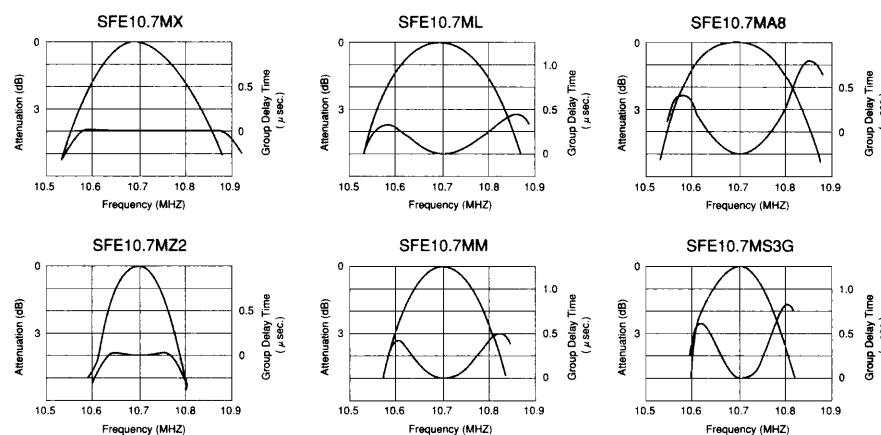
• The rank of center frequency is available in two series: 30kHz steps and 25kHz steps.

• The GDT waveforms of all these types are controlled.

(): Typ. values

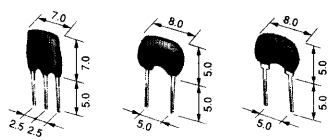
■ Minimum Quantity (order in sets only) : 500 pcs.

Frequency Characteristics



FM Detectors, 10.7MHz

CDA10.7MA□ CDA10.7MC□ CDA10.7MG□



(in mm)

Part Number	Detection System	Applicable IC
CDA10.7MA□	Quadrature	HA1137W, LA1265
CDA10.7MC□	Quadrature	CXA1019M, MC3356P, LA7770, BA1440
CDA10.7MG□	Quadrature(Broad band)	CX-20029, CX-20111, TA8122AN, LA1816
	Differential Peak	TA7303P

• Extension □ depends on applied IC.

• Each IC needs individual ceramic discriminator. Please contact us for specifications, circuit constants and the part number for each IC.

Examples of specifications

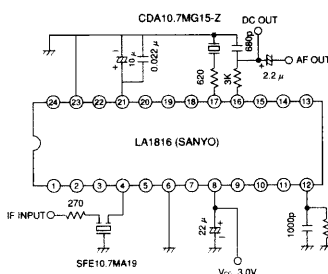
Part Number	Demodulation Output (mV) min	Demodulation Factor (%) max.	Demodulation 3dB Bandwidth (kHz) min.	Detection System	Applicable IC
CDA10.7MC1	35	1.0	242	Quadrature	CXA1019M, CX-20091
CDA10.7MG1	25	1.0	345	Quadrature	CX-20029, CX-20111
CDA10.7MG15	45	0.7	400	Quadrature	LA1816
CDA10.7MG16	60	0.9	300	Quadrature	TA8122AN

• 30% Dev.

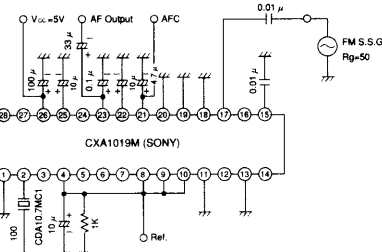
■ Minimum Quantity (order in sets only) : 500 pcs.

Examples of Applications

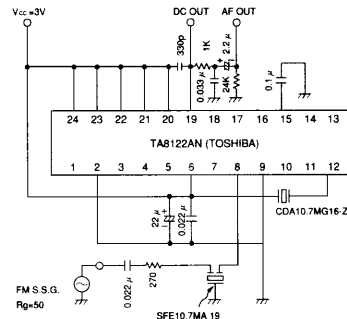
CDA10.7MG15



CDA10.7MC1



CDA10.7MG16

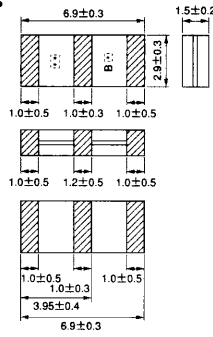
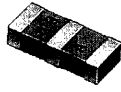


FILTERS FOR AUDIO VISUAL EQUIPMENT

CERAMIC FILTERS (CERAFIL®) FOR FM

CERAFIL® FOR FM

Chip Type SFECA10.7 Series



*: EIAJ Data Code
 **: Center Frequency Rank Code

(in mm)

Char. Part Number	3dB Pass Bandwidth (kHz)	20dB Attenuation Bandwidth (kHz) max.	Insertion Loss (dB) max.	Spurious Attenuation (9-12MHz) (dB) min.
SFECA10.7MA5	280±50	650	6	30
SFECA10.7MS2	230±50	600	6	30

- Features
 1. Super-thin (1.5mm)
 2. Reflow Soldering is available.

- Applications
 Small, thin radios
 Head phone stereos

■ Minimum Quantity (order in sets only) : 2,000 pcs./reel

NOTES

for FM

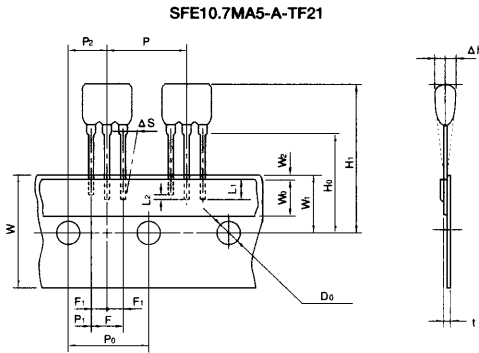
- Two kinds of center frequency grouping are available: 30kHz steps and 25kHz steps. The series of 25kHz steps is most suitable for synthesized tuners. This type is identified by the H at the end of the part number. (Ex.) SFE10.7MS2H-Z
- ±20kHz tolerance of the center frequency is also available. This type is identified by the K at the end of the part number. (Ex.) SFE10.7MS2K-A
- The temperature coefficient of center frequency is ±50ppm/°C or less in the range between -20°C and +80°C.
- The best waveform can be obtained at the specified input/output impedance. Please note that input/output load capacitance influences the waveform change.

30kHz steps	Color	25kHz steps
D: 10.64MHz±30kHz	Black	D: 10.650MHz±25kHz
B: 10.67MHz±30kHz	Blue	B: 10.675MHz±25kHz
A: 10.70MHz±30kHz	Red	A: 10.700MHz±25kHz
C: 10.73MHz±30kHz	Orange	C: 10.725MHz±25kHz
E: 10.76MHz±30kHz	White	E: 10.750MHz±25kHz

Taping Dimensions

SFE10.7M□□- *-TF21

(*: Center Frequency Rank)



- When packaged, components of different center frequencies are not mixed.
- Compatible with various automatic insertion.
- Flat pack is the standard package type.

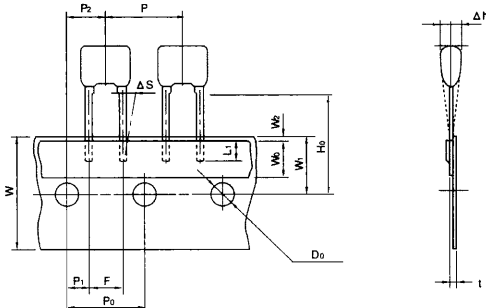
■ Minimum Quantity (order in sets only) : 1,500 pcs./flat pack

CDA10.7MC/MG□□- *-TF21

(*: Center Frequency Rank)

□: Design Number (Corresponds to a specified IC)

CDA10.7MC□□-A-TF21



- Compatible with various automatic insertion.
- Flat pack is the standard package type.

■ Minimum Quantity (order in sets only) : 1,500 pcs./flat pack

Item	Code	Dimensions(mm)	Note
Portion to Cut in Case of Defect	L ₁	3 min.	
	L ₂	2.0 max.	Pay attention to directivity
Pitch of Component	P	12.7±0.5	
Pitch of Sprocket Hole	P ₀	12.7±0.2	
Length from Hole Center to Lead	P ₁	3.85±0.4	
Length from Hole Center to Component Center	P ₂	6.35±0.2	
Lead Spacing (1)	F	5.0 ^{+0.5} _{-0.2}	
Lead Spacing (2)	F ₁	2.5±0.2	
Deviation across Tape	Δh	0±0.1	
Deviation along Tape, Left or Right	Δs	0±0.1	
Carrier Tape Width	W	18.0±0.5	
Hold-down Tape Width	W ₀	6.0 min.	Hold-down tape should not overflow the base tape.
Position of Sprocket Hole	W ₁	9.0±0.5	
Hold-down Tape Width	W ₂	0 ^{+1.0} ₋₀	
Lead Distance between Reference and Bottom Planes	H ₀	18.0±0.5	
Diameter of Sprocket Hole	D ₀	φ 4.0±0.2	
Total Tape Thickness	t	0.6±0.2	

Item	Code	Dimensions(mm)	Note
Portion to Cut in Case of Defect	L ₁	3 min.	
Pitch of Component	P	12.7±0.5	
Pitch of Sprocket Hole	P ₀	12.7±0.5	
Length from Hole Center to Lead	P ₁	3.85±0.4	
Length from Hole Center to Component Center	P ₂	6.35±0.2	
Lead Spacing (1)	F	5.0 ^{+0.5} _{-0.2}	
Deviation across Tape	Δh	0±1.5	
Deviation along Tape, Left or Right	Δs	0±0.1	
Carrier Tape Width	W	18.0±0.5	
Hold-down Tape Width	W ₀	6.0 min.	Hold-down tape should not overflow the base tape.
Position of Sprocket Hole	W ₁	9.0±0.5	
Hold-down Tape Width	W ₂	0 ^{+1.0} ₋₀	
Lead Distance between Reference and Bottom Planes	H ₀	18.0±0.5	
Diameter of Sprocket Hole	D ₀	φ 4.0±0.2	
Total Tape Thickness	t	0.6±0.2	

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