

Series 1213 Metallized Polypropylene

Features: Flame retardant to UL94, excellent long term stability, self healing, high insulation resistance, low dissipation factor, high frequency operation.

Applications: Timing circuits, switch mode power supplies (SMPS).

Packaging: Axial wrap and fill (TF, TC), radial lead box (EFR), axial lead epoxy tube (EC).

Specifications

1) Temperature Range

-55°C to +105°C at rated voltage.

2) Capacitance

0.001μF to 20μF

3) Dielectric Strength

At 25°C, 150% of rated voltage when applied terminal to terminal for one minute through a current limiting resistance.

4) Insulation Resistance

At 25°C after 2 minutes charge time at rated voltage or 500 VDC, whichever is less, the minimum IR shall be 80,000 Megohm-Microfarads, but need not exceed 120,000 Megohms.

5) Humidity Resistance

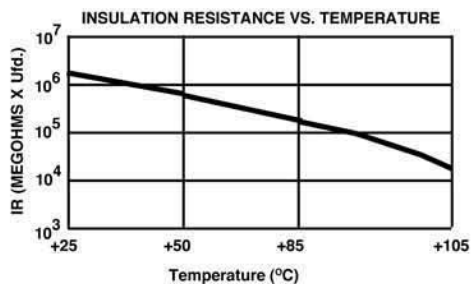
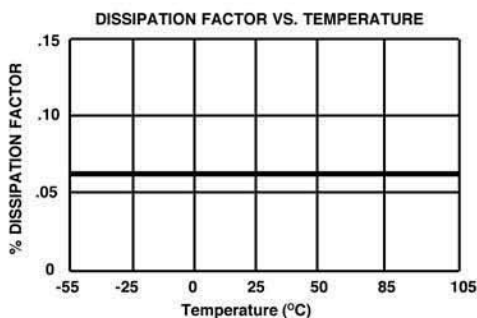
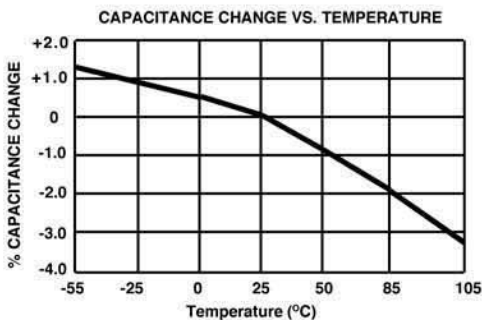
Series 1213 shall meet the requirements of MIL-STD. 202, Method 103B.

6) Dissipation Factor

Shall be 0.1% max. when measured at 1 KHz and 25°C.

7) Life Test

Will withstand the application of 150% rated voltage at + 85°C for 250 hours with not more than one failure in 12 permitted.



Typical Temperature Curves Metallized Polypropylene

Catalog Nomenclature

*** 1 3 0 6 E F R - 3 - . 0 0 1 - 1 - 5**

Case Code:

TC - Wrap & Fill - Round - Axial
 TF - Wrap & Fill - Flat - Axial
 EC - Epoxy Case - Round - Axial
 EFR - Epoxy Case - Flat - Radial
 DFR - Dipped Construction - Flat - Radial
 HS - Hermetically Sealed

Dielectric Code:

1206 - Polypropylene/Foil
 1213 - Metallized Polypropylene
 1306 - Polyester/Foil
 1313 - Metallized Polyester
 1613 - Metallized Polycarbonate
 1906 - Polystyrene/Foil
 2113 - Metallized Polyphenylene Sulfide

Size Code:

3 - Standard
 2 - Miniature (1313DFR Series Only)
 X - Non-standard
 Or one letter case code

Capacitance:

In microfarads (μ F)

Voltage:

.35 - 35 VDC
 0 - 50 VDC
 1 - 100 VDC
 2 - 200 VDC
 3 - 300 VDC
 4 - 400 VDC
 10 - 1000 VDC
 1.6K - 1600VDC
 Etc.

Tolerance:

1 - 1%
 2 - 2%
 5 - 5%
 Etc.

*** Options**

The following options are available from EFC by specifying the appropriate prefix.

- A - Aluminum foil electrodes
- T - Tin foil electrodes
- HV - High voltage DC applications
- AC - AC voltage rated applications
- MF - Metallized and foil hybrid for maximum pulse current applications
- M - Dual metallized design for pulse current applications
- SP - Low ESR, high RMS current applications
- PC - Direct mount terminals for high current filter applications
- FT - Feed thru filter applications
- RC - Resistor capacitor suppressors

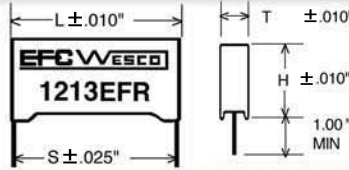


Please consult factory for special requirements, including non-standard values and sizes

1213EFR
Rectangular Plastic Case
(Radial Leads)

Metallized Polypropylene Capacitors

Lead Specs -
Tinned Copperweld
B through E cases: 22 AWG
F through Q cases: 20 AWG



Dimensions and Ratings

63 VDC / 40 VAC						160 VDC / 100 VAC					
Cap.	Part #	T	L	H	S	Cap.	Part #	T	L	H	S
μF		in. (mm)	in. (mm)	in. (mm)	in. (mm)	μF		in. (mm)	in. (mm)	in. (mm)	in. (mm)
.001	1213EFR-B-.001-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.001	1213EFR-B-.001-1.6-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0012	1213EFR-B-.0012-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.0012	1213EFR-B-.0012-1.6-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0015	1213EFR-B-.0015-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.0015	1213EFR-B-.0015-1.6-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0018	1213EFR-B-.0018-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.0018	1213EFR-B-.0018-1.6-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0022	1213EFR-B-.0022-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.0022	1213EFR-B-.0022-1.6-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0027	1213EFR-B-.0027-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.0027	1213EFR-B-.0027-1.6-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0033	1213EFR-B-.0033-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.0033	1213EFR-B-.0033-1.6-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0039	1213EFR-B-.0039-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.0039	1213EFR-B-.0039-1.6-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0047	1213EFR-B-.0047-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.0047	1213EFR-B-.0047-1.6-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0056	1213EFR-B-.0056-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.0056	1213EFR-B-.0056-1.6-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0068	1213EFR-B-.0068-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.0068	1213EFR-B-.0068-1.6-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0082	1213EFR-B-.0082-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.0082	1213EFR-B-.0082-1.6-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.01	1213EFR-B-.01-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.01	1213EFR-B-.01-1.6-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.012	1213EFR-B-.012-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.012	1213EFR-B-.012-1.6-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.015	1213EFR-B-.015-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.015	1213EFR-B-.015-1.6-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.018	1213EFR-B-.018-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.018	1213EFR-C-.018-1.6-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.022	1213EFR-B-.022-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.022	1213EFR-C-.022-1.6-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.027	1213EFR-B-.027-63-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)	.027	1213EFR-C-.027-1.6-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.033	1213EFR-C-.033-63-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)	.033	1213EFR-C-.033-1.6-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.039	1213EFR-C-.039-63-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)	.039	1213EFR-C-.039-1.6-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.047	1213EFR-C-.047-63-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)	.047	1213EFR-D-.047-1.6-*	.197 (5.0)	.512 (13.0)	.433 (11.0)	.394 (10.0)
.056	1213EFR-C-.056-63-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)	.056	1213EFR-D-.056-1.6-*	.197 (5.0)	.512 (13.0)	.433 (11.0)	.394 (10.0)
.068	1213EFR-D-.068-63-*	.197 (5.0)	.512 (13.0)	.433 (11.0)	.394 (10.0)	.068	1213EFR-E-.068-1.6-*	.236 (6.0)	.512 (13.0)	.472 (12.0)	.394 (10.0)
.082	1213EFR-D-.082-63-*	.197 (5.0)	.512 (13.0)	.433 (11.0)	.394 (10.0)	.082	1213EFR-E-.082-1.6-*	.236 (6.0)	.512 (13.0)	.472 (12.0)	.394 (10.0)
.1	1213EFR-E-.1-63-*	.236 (6.0)	.512 (13.0)	.472 (12.0)	.394 (10.0)	.1	1213EFR-F-.1-1.6-*	.197 (5.0)	.709 (18.0)	.433 (11.0)	.591 (15.0)
.12	1213EFR-E-.12-63-*	.236 (6.0)	.512 (13.0)	.472 (12.0)	.394 (10.0)	.12	1213EFR-G-.12-1.6-*	.236 (6.0)	.709 (18.0)	.472 (12.0)	.591 (15.0)
.15	1213EFR-F-.15-63-*	.197 (5.0)	.709 (18.0)	.433 (11.0)	.591 (15.0)	.15	1213EFR-G-.15-1.6-*	.236 (6.0)	.709 (18.0)	.472 (12.0)	.591 (15.0)
.18	1213EFR-F-.18-63-*	.197 (5.0)	.709 (18.0)	.433 (11.0)	.591 (15.0)	.18	1213EFR-H-.18-1.6-*	.295 (7.5)	.709 (18.0)	.531 (13.5)	.591 (15.0)
.22	1213EFR-G-.22-63-*	.236 (6.0)	.709 (18.0)	.472 (12.0)	.591 (15.0)	.22	1213EFR-H-.22-1.6-*	.295 (7.5)	.709 (18.0)	.531 (13.5)	.591 (15.0)
.27	1213EFR-G-.27-63-*	.236 (6.0)	.709 (18.0)	.472 (12.0)	.591 (15.0)	.27	1213EFR-K-.27-1.6-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.787 (20.0)
.33	1213EFR-H-.33-63-*	.295 (7.5)	.709 (18.0)	.531 (13.5)	.591 (15.0)	.27	1213EFR-M-.27-1.6-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.886 (22.5)
.39	1213EFR-H-.39-63-*	.295 (7.5)	.709 (18.0)	.531 (13.5)	.591 (15.0)	.33	1213EFR-K-.33-1.6-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.787 (20.0)
.47	1213EFR-J-.47-63-*	.236 (6.0)	1.04 (26.5)	.591 (15.0)	.787 (20.0)	.33	1213EFR-M-.33-1.6-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.886 (22.5)
.47	1213EFR-L-.47-63-*	.236 (6.0)	1.04 (26.5)	.591 (15.0)	.886 (22.5)	.39	1213EFR-N-.39-1.6-*	.335 (8.5)	1.04 (26.5)	.642 (16.3)	.886 (22.5)
.56	1213EFR-K-.56-63-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.787 (20.0)	.47	1213EFR-N-.47-1.6-*	.335 (8.5)	1.04 (26.5)	.642 (16.3)	.886 (22.5)
.56	1213EFR-M-.56-63-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.886 (22.5)	.56	1213EFR-O-.56-1.6-*	.394 (10.0)	1.04 (26.5)	.748 (19.0)	.886 (22.5)
.68	1213EFR-N-.68-63-*	.335 (8.5)	1.04 (26.5)	.642 (16.3)	.886 (22.5)	.68	1213EFR-P-.68-1.6-*	.433 (11.0)	1.26 (32.0)	.787 (20.0)	1.08 (27.5)
.82	1213EFR-O-.82-63-*	.394 (10.0)	1.04 (26.5)	.748 (19.0)	.886 (22.5)	.82	1213EFR-P-.82-1.6-*	.433 (11.0)	1.26 (32.0)	.787 (20.0)	1.08 (27.5)
1.0	1213EFR-O-1.0-63-*	.394 (10.0)	1.04 (26.5)	.748 (19.0)	.886 (22.5)	1.0	1213EFR-Q-1.0-1.6-*	.433 (11.0)	1.26 (32.0)	.787 (20.0)	1.08 (27.5)
1.2	1213EFR-P-1.2-63-*	.433 (11.0)	1.26 (32.0)	.787 (20.0)	1.08 (27.5)	1.2	1213EFR-Q-1.2-1.6-*	.512 (13.0)	1.26 (32.0)	.866 (22.0)	1.08 (27.5)
1.5	1213EFR-Q-1.5-63-*	.512 (13.0)	1.26 (32.0)	.866 (22.0)	1.08 (27.5)						

* - Please insert appropriate tolerance code

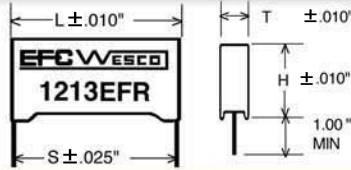


Please consult factory for special requirements, including non-standard values and sizes

1213EFR
Rectangular Plastic Case
(Radial Leads)

Metallized Polypropylene Capacitors

Lead Specs -
Tinned Copperweld
B through E cases: 22 AWG
F through Q cases: 20 AWG



Dimensions and Ratings

250 VDC / 160 VAC					
Cap.	Part #	T	L	H	S
μF		in. (mm)	in. (mm)	in. (mm)	in. (mm)
.001	1213EFR-B-.001-2.5-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0012	1213EFR-B-.0012-2.5-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0015	1213EFR-B-.0015-2.5-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0018	1213EFR-B-.0018-2.5-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0022	1213EFR-B-.0022-2.5-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0027	1213EFR-B-.0027-2.5-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0033	1213EFR-B-.0033-2.5-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0039	1213EFR-B-.0039-2.5-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0047	1213EFR-B-.0047-2.5-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0056	1213EFR-B-.0056-2.5-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0068	1213EFR-B-.0068-2.5-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0082	1213EFR-B-.0082-2.5-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.01	1213EFR-B-.01-2.5-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.012	1213EFR-B-.012-2.5-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.015	1213EFR-C-.015-2.5-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.018	1213EFR-C-.018-2.5-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.022	1213EFR-C-.022-2.5-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.027	1213EFR-C-.027-2.5-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.033	1213EFR-D-.033-2.5-*	.197 (5.0)	.512 (13.0)	.433 (11.0)	.394 (10.0)
.039	1213EFR-D-.039-2.5-*	.197 (5.0)	.512 (13.0)	.433 (11.0)	.394 (10.0)
.047	1213EFR-E-.047-2.5-*	.236 (6.0)	.512 (13.0)	.472 (12.0)	.394 (10.0)
.056	1213EFR-E-.056-2.5-*	.236 (6.0)	.512 (13.0)	.472 (12.0)	.394 (10.0)
.068	1213EFR-E-.068-2.5-*	.236 (6.0)	.512 (13.0)	.472 (12.0)	.394 (10.0)
.082	1213EFR-G-.082-2.5-*	.236 (6.0)	.709 (18.0)	.472 (12.0)	.591 (15.0)
.1	1213EFR-G-.1-2.5-*	.236 (6.0)	.709 (18.0)	.472 (12.0)	.591 (15.0)
.12	1213EFR-G-.12-2.5-*	.236 (6.0)	.709 (18.0)	.472 (12.0)	.591 (15.0)
.15	1213EFR-H-.15-2.5-*	.295 (7.5)	.709 (18.0)	.531 (13.5)	.591 (15.0)
.18	1213EFR-H-.18-2.5-*	.295 (7.5)	.709 (18.0)	.531 (13.5)	.591 (15.0)
.22	1213EFR-H-.22-2.5-*	.295 (7.5)	.709 (18.0)	.531 (13.5)	.591 (15.0)
.27	1213EFR-K-.27-2.5-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.787 (20.0)
.27	1213EFR-M-.27-2.5-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.886 (22.5)
.33	1213EFR-K-.33-2.5-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.787 (20.0)
.33	1213EFR-M-.33-2.5-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.886 (22.5)
.39	1213EFR-N-.39-2.5-*	.335 (8.5)	1.04 (26.5)	.642 (16.3)	.886 (22.5)
.47	1213EFR-O-.47-2.5-*	.394 (10.0)	1.04 (26.5)	.748 (19.0)	.886 (22.5)
.56	1213EFR-O-.56-2.5-*	.394 (10.0)	1.04 (26.5)	.748 (19.0)	.886 (22.5)
.68	1213EFR-P-.68-2.5-*	.433 (11.0)	1.26 (32.0)	.787 (20.0)	1.08 (27.5)
.82	1213EFR-P-.82-2.5-*	.433 (11.0)	1.26 (32.0)	.787 (20.0)	1.08 (27.5)
1.0	1213EFR-Q-1.0-2.5-*	.512 (13.0)	1.26 (32.0)	.866 (22.0)	1.08 (27.5)

400 VDC / 220 VAC					
Cap.	Part #	T	L	H	S
μF		in. (mm)	in. (mm)	in. (mm)	in. (mm)
.001	1213EFR-B-.001-4-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0012	1213EFR-B-.0012-4-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0015	1213EFR-B-.0015-4-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0018	1213EFR-B-.0018-4-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0022	1213EFR-B-.0022-4-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0027	1213EFR-B-.0027-4-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0033	1213EFR-B-.0033-4-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0039	1213EFR-B-.0039-4-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0047	1213EFR-B-.0047-4-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0056	1213EFR-B-.0056-4-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0068	1213EFR-B-.0068-4-*	.157 (4.0)	.413 (10.5)	.354 (9.0)	.295 (7.5)
.0082	1213EFR-C-.0082-4-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.01	1213EFR-C-.01-4-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.012	1213EFR-C-.012-4-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.015	1213EFR-C-.015-4-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.018	1213EFR-C-.018-4-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.022	1213EFR-D-.022-4-*	.197 (5.0)	.512 (13.0)	.433 (11.0)	.394 (10.0)
.027	1213EFR-D-.027-4-*	.197 (5.0)	.512 (13.0)	.433 (11.0)	.394 (10.0)
.033	1213EFR-E-.033-4-*	.236 (6.0)	.512 (13.0)	.472 (12.0)	.394 (10.0)
.039	1213EFR-E-.039-4-*	.236 (6.0)	.512 (13.0)	.472 (12.0)	.394 (10.0)
.047	1213EFR-F-.047-4-*	.197 (5.0)	.709 (18.0)	.433 (11.0)	.591 (15.0)
.056	1213EFR-G-.056-4-*	.236 (6.0)	.709 (18.0)	.472 (12.0)	.591 (15.0)
.068	1213EFR-G-.068-4-*	.236 (6.0)	.709 (18.0)	.472 (12.0)	.591 (15.0)
.082	1213EFR-H-.082-4-*	.295 (7.5)	.709 (18.0)	.531 (13.5)	.591 (15.0)
.1	1213EFR-H-.1-4-*	.295 (7.5)	.709 (18.0)	.531 (13.5)	.591 (15.0)
.12	1213EFR-K-.12-4-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.787 (20.0)
.12	1213EFR-M-.12-4-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.886 (22.5)
.15	1213EFR-K-.15-4-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.787 (20.0)
.15	1213EFR-M-.15-4-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.886 (22.5)
.18	1213EFR-N-.18-4-*	.335 (8.5)	1.04 (26.5)	.642 (16.3)	.886 (22.5)
.22	1213EFR-N-.22-4-*	.335 (8.5)	1.04 (26.5)	.642 (16.3)	.886 (22.5)
.27	1213EFR-O-.27-4-*	.394 (10.0)	1.04 (26.5)	.748 (19.0)	.886 (22.5)
.33	1213EFR-P-.33-4-*	.433 (11.0)	1.26 (32.0)	.787 (20.0)	1.08 (27.5)
.39	1213EFR-P-.39-4-*	.433 (11.0)	1.26 (32.0)	.787 (20.0)	1.08 (27.5)
.47	1213EFR-P-.47-4-*	.433 (11.0)	1.26 (32.0)	.787 (20.0)	1.08 (27.5)
.56	1213EFR-Q-.56-4-*	.512 (13.0)	1.26 (32.0)	.866 (22.0)	1.08 (27.5)

* - Please insert appropriate tolerance code

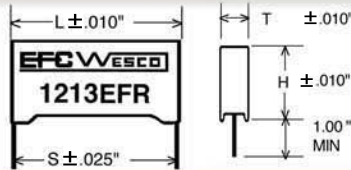


Please consult factory for special requirements, including non-standard values and sizes

1213EFR
Rectangular Plastic Case
(Radial Leads)

Metallized Polypropylene Capacitors

Lead Specs -
Tinned Copperweld
B through E cases: 22 AWG
F through Q cases: 20 AWG



Dimensions and Ratings

Cap.	630 VDC / 250 VAC				
μF	Part #	T in. (mm)	L in. (mm)	H in. (mm)	S in. (mm)
.001	1213EFR-C-.001-6.3-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.0012	1213EFR-C-.0012-6.3-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.0015	1213EFR-C-.0015-6.3-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.0018	1213EFR-C-.0018-6.3-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.0022	1213EFR-C-.0022-6.3-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.0027	1213EFR-C-.0027-6.3-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.0033	1213EFR-C-.0033-6.3-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.0039	1213EFR-C-.0039-6.3-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.0047	1213EFR-C-.0047-6.3-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.0056	1213EFR-C-.0056-6.3-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.0068	1213EFR-C-.0068-6.3-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.0082	1213EFR-C-.0082-6.3-*	.157 (4.0)	.512 (13.0)	.354 (9.0)	.394 (10.0)
.01	1213EFR-D-.01-6.3-*	.197 (5.0)	.512 (13.0)	.433 (11.0)	.394 (10.0)
.012	1213EFR-D-.012-6.3-*	.197 (5.0)	.512 (13.0)	.433 (11.0)	.394 (10.0)
.015	1213EFR-E-.015-6.3-*	.236 (6.0)	.512 (13.0)	.472 (12.0)	.394 (10.0)
.018	1213EFR-E-.018-6.3-*	.236 (6.0)	.512 (13.0)	.472 (12.0)	.394 (10.0)
.022	1213EFR-F-.022-6.3-*	.197 (5.0)	.709 (18.0)	.433 (11.0)	.591 (15.0)
.027	1213EFR-G-.027-6.3-*	.236 (6.0)	.709 (18.0)	.472 (12.0)	.591 (15.0)
.033	1213EFR-G-.033-6.3-*	.236 (6.0)	.709 (18.0)	.472 (12.0)	.591 (15.0)
.039	1213EFR-E-.039-6.3-*	.295 (7.5)	.709 (18.0)	.531 (13.5)	.591 (15.0)
.047	1213EFR-H-.047-6.3-*	.295 (7.5)	.709 (18.0)	.531 (13.5)	.591 (15.0)
.056	1213EFR-H-.056-6.3-*	.295 (7.5)	.709 (18.0)	.531 (13.5)	.591 (15.0)
.068	1213EFR-K-.068-6.3-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.787 (20.0)
.068	1213EFR-M-.068-6.3-*	.276 (7.0)	1.04 (26.5)	.630 (16.0)	.886 (22.5)
.082	1213EFR-N-.082-6.3-*	.335 (8.5)	1.04 (26.5)	.642 (16.3)	.886 (22.5)
.1	1213EFR-N-.1-6.3-*	.335 (8.5)	1.04 (26.5)	.642 (16.3)	.886 (22.5)
.12	1213EFR-O-.12-6.3-*	.394 (10.0)	1.04 (26.5)	.748 (19.0)	.886 (22.5)
.15	1213EFR-P-.15-6.3-*	.433 (11.0)	1.26 (32.0)	.787 (20.0)	1.08 (27.5)
.18	1213EFR-P-.18-6.3-*	.433 (11.0)	1.26 (32.0)	.787 (20.0)	1.08 (27.5)
.22	1213EFR-P-.22-6.3-*	.433 (11.0)	1.26 (32.0)	.787 (20.0)	1.08 (27.5)
.27	1213EFR-Q-.27-6.3-*	.512 (13.0)	1.26 (32.0)	.866 (22.0)	1.08 (27.5)

* - Please insert appropriate tolerance code