

Series 1306 Polyester and Foil

Features: Flame retardant to UL94, cost effective, moderate temperature choice, small size, dv/dt ratings in excess of 1000 V/us.

Applications: Recommended for DC applications where blocking capacitance stability is not a critical factor, medical electronics, telecommunications.

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

Specifications

1) Temperature Range

-55°C to 85°C at rated voltage to 125°C with 50% voltage derating.

2) Capacitance

0.001µf to 10µF

3) Dielectric Strength

At 25°C, 200% 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 50,000 Megohm-Microfarads, but need not exceed 100,000 Megohms.

5) Humidity Resistance

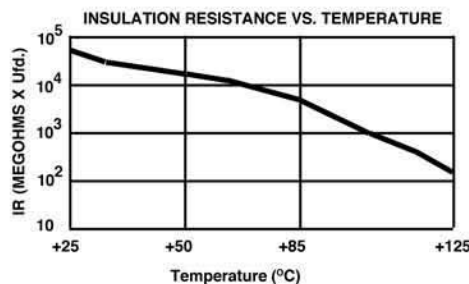
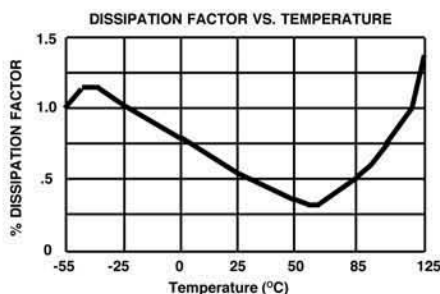
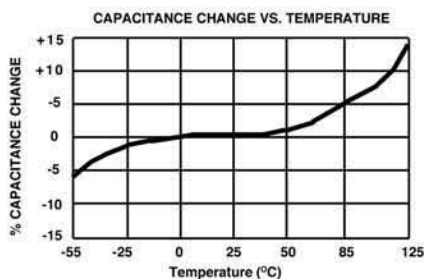
Series 1306 shall meet the requirements of MIL-STD. 202, Method 103B.

6) Dissipation Factor

Shall be 0.6% max. when measured at 1 KHz and 25°C.

7) Life Test

Will withstand the application of 140% rated voltage at + 85°C for 250 hours with not more than one failure in 12 permitted.



Typical Temperature Curves Polyester and Foil

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

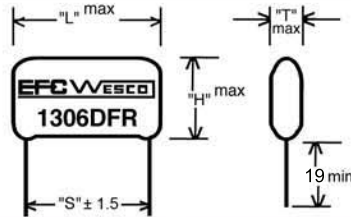


1306DFR
Epoxy Dipped (Radial Leads)

Polyester and Foil Capacitors

Lead Specs -
Tinned Copperweld

L	S	LEAD DIA
10.5	7.5	0.6
13.0	10.0	0.6
18.5	15.0	0.8
26.0	22.5	0.8
31.0	27.5	0.8
36.0	32.0	0.8
44.0	38.0	1.0



All dimensions
in mm

Dimensions and Ratings

100 VDC					160 VDC					250 VDC				
Cap.	Part #	T	H	L	Cap.	Part #	T	H	L	Cap.	Part #	T	H	L
.001	1306DFR-3-.001-1-*	4.0	8.0	10.5	.001	1306DFR-3-.001-1.6-*	4.0	8.0	10.5	.001	1306DFR-3-.001-2.5-*	4.0	8.0	10.5
.0012	1306DFR-3-.0012-1-*	4.0	8.0	10.5	.0012	1306DFR-3-.0012-1.6-*	4.0	8.0	10.5	.0012	1306DFR-3-.0012-2.5-*	4.0	8.0	10.5
.0015	1306DFR-3-.0015-1-*	4.0	8.0	10.5	.0015	1306DFR-3-.0015-1.6-*	4.0	8.0	10.5	.0015	1306DFR-3-.0015-2.5-*	4.0	8.0	10.5
.0022	1306DFR-3-.0022-1-*	4.0	8.0	10.5	.0022	1306DFR-3-.0022-1.6-*	4.5	8.0	10.5	.0022	1306DFR-3-.0022-2.5-*	4.5	8.5	10.5
.0027	1306DFR-3-.0027-1-*	4.0	8.0	10.5	.0027	1306DFR-3-.0027-1.6-*	4.5	8.0	10.5	.0027	1306DFR-3-.0027-2.5-*	4.5	8.5	10.5
.0039	1306DFR-3-.0039-1-*	4.5	8.0	10.5	.0039	1306DFR-3-.0039-1.6-*	4.5	9.0	10.5	.0039	1306DFR-3-.0039-2.5-*	4.5	9.0	10.5
.0047	1306DFR-3-.0047-1-*	4.5	8.5	10.5	.0047	1306DFR-3-.0047-1.6-*	4.5	9.0	10.5	.0047	1306DFR-3-.0047-2.5-*	4.5	9.0	10.5
.0056	1306DFR-3-.0056-1-*	4.5	8.5	10.5	.0056	1306DFR-3-.0056-1.6-*	4.5	9.0	10.5	.0056	1306DFR-3-.0056-2.5-*	4.5	9.0	10.5
.0068	1306DFR-3-.0068-1-*	4.5	9.0	10.5	.0068	1306DFR-3-.0068-1.6-*	4.5	9.0	10.5	.0068	1306DFR-3-.0068-2.5-*	4.5	9.0	10.5
.0082	1306DFR-3-.0082-1-*	4.5	9.0	10.5	.0082	1306DFR-3-.0082-1.6-*	4.5	9.0	10.5	.0082	1306DFR-3-.0082-2.5-*	4.5	9.0	13.0
.01	1306DFR-3-.01-1-*	4.5	9.0	10.5	.01	1306DFR-3-.01-1.6-*	4.5	9.0	10.5	.01	1306DFR-3-.01-2.5-*	4.5	9.0	13.0
.012	1306DFR-3-.012-1-*	4.5	9.0	10.5	.012	1306DFR-3-.012-1.6-*	4.5	9.0	10.5	.012	1306DFR-3-.012-2.5-*	4.5	9.0	13.0
.015	1306DFR-3-.015-1-*	4.5	9.0	10.5	.015	1306DFR-3-.015-1.6-*	4.5	9.0	13.0	.015	1306DFR-3-.015-2.5-*	5.0	10.0	13.0
.018	1306DFR-3-.018-1-*	4.5	9.0	10.5	.018	1306DFR-3-.018-1.6-*	4.5	9.5	13.0	.018	1306DFR-3-.018-2.5-*	5.5	11.0	13.0
.022	1306DFR-3-.022-1-*	4.5	9.0	10.5	.022	1306DFR-3-.022-1.6-*	5.0	10.0	13.0	.022	1306DFR-3-.022-2.5-*	6.0	12.0	13.0
.027	1306DFR-3-.027-1-*	4.5	9.0	13.5	.027	1306DFR-3-.027-1.6-*	5.5	11.0	13.0	.027	1306DFR-3-.027-2.5-*	5.0	10.0	18.5
.033	1306DFR-3-.033-1-*	5.0	9.5	13.0	.033	1306DFR-3-.033-1.6-*	6.0	12.5	13.0	.033	1306DFR-3-.033-2.5-*	5.5	10.5	18.5
.039	1306DFR-3-.039-1-*	5.0	10.0	13.0	.039	1306DFR-3-.039-1.6-*	5.0	10.0	18.5	.039	1306DFR-3-.039-2.5-*	5.5	11.0	18.5
.047	1306DFR-3-.047-1-*	5.5	11.0	13.0	.047	1306DFR-3-.047-1.6-*	5.5	10.5	18.5	.047	1306DFR-3-.047-2.5-*	6.0	12.0	18.5
.056	1306DFR-3-.056-1-*	6.0	12.0	13.0	.056	1306DFR-3-.056-1.6-*	5.5	11.0	18.5	.056	1306DFR-3-.056-2.5-*	6.5	12.5	18.5
.068	1306DFR-3-.068-1-*	6.5	12.5	13.0	.068	1306DFR-3-.068-1.6-*	6.0	12.0	18.5	.068	1306DFR-3-.068-2.5-*	7.0	13.0	18.5
.082	1306DFR-3-.082-1-*	5.0	10.0	18.5	.082	1306DFR-3-.082-1.6-*	6.5	12.5	18.5	.082	1306DFR-3-.082-2.5-*	7.5	14.0	18.5
.1	1306DFR-3-.1-1-*	5.5	11.0	18.5	.1	1306DFR-3-.1-1.6-*	7.5	13.5	18.5	.1	1306DFR-3-.1-2.5-*	8.5	15.5	18.5
.12	1306DFR-3-.12-1-*	6.0	12.0	18.5	.12	1306DFR-3-.12-1.6-*	8.0	14.0	18.5	.12	1306DFR-3-.12-2.5-*	8.0	14.0	26.0
.15	1306DFR-3-.15-1-*	6.5	12.5	18.5	.15	1306DFR-3-.15-1.6-*	8.5	16.0	18.5	.15	1306DFR-3-.15-2.5-*	8.5	15.5	26.0
.18	1306DFR-3-.18-1-*	7.5	13.5	18.5	.18	1306DFR-3-.18-1.6-*	8.0	14.0	26.0	.18	1306DFR-3-.18-2.5-*	9.0	16.5	26.0
.22	1306DFR-3-.22-1-*	8.5	15.5	18.5	.22	1306DFR-3-.22-1.6-*	8.5	15.5	26.0	.22	1306DFR-3-.22-2.5-*	9.5	18.0	26.0
.27	1306DFR-3-.27-1-*	8.0	14.0	26.0	.27	1306DFR-3-.27-1.6-*	9.0	16.5	26.0	.27	1306DFR-3-.27-2.5-*	9.5	18.0	31.0
.33	1306DFR-3-.33-1-*	8.5	15.5	26.0	.33	1306DFR-3-.33-1.6-*	9.5	18.0	26.0	.33	1306DFR-3-.33-2.5-*	10.0	20.0	31.0
.39	1306DFR-3-.39-1-*	9.0	16.5	26.0	.39	1306DFR-3-.39-1.6-*	9.5	18.0	31.0	.39	1306DFR-3-.39-2.5-*	11.0	21.0	31.0
.47	1306DFR-3-.47-1-*	9.5	18.0	26.0	.47	1306DFR-3-.47-1.6-*	10.0	20.0	31.0	.47	1306DFR-3-.47-2.5-*	12.0	22.0	31.0
.56	1306DFR-3-.56-1-*	9.0	16.5	31.0	.56	1306DFR-3-.56-1.6-*	11.0	21.0	31.0	.56	1306DFR-3-.56-2.5-*	13.0	24.0	31.0
.68	1306DFR-3-.68-1-*	9.5	18.0	31.0	.68	1306DFR-3-.68-1.6-*	12.5	22.0	31.0	.68	1306DFR-3-.68-2.5-*	13.0	24.0	36.0
.82	1306DFR-3-.82-1-*	10.5	20.0	31.0	.82	1306DFR-3-.82-1.6-*	13.0	24.0	31.0	.82	1306DFR-3-.82-2.5-*	14.5	26.0	36.0
1.0	1306DFR-3-1.0-1-*	12.5	24.0	31.0	1.0	1306DFR-3-1.0-1.6-*	15.0	26.0	31.0	1.0	1306DFR-3-1.0-2.5-*	14.5	26.0	44.0

* - Please insert appropriate tolerance code

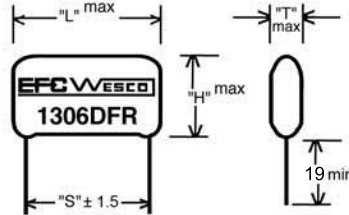


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26.0	22.5	0.8
31.0	27.5	0.8
36.0	32.0	0.8
44.0	38.0	1.0



All dimensions
in mm

Dimensions and Ratings

400 VDC					630 VDC					1000 VDC				
Cap.	Part #	T	H	L	Cap.	Part #	T	H	L	Cap.	Part #	T	H	L
.001	1306DFR-3-.001-4-*	4.0	8.0	10.5	.001	1306DFR-3-.001-6.3-*	4.0	9.0	10.5	.001	1306DFR-3-.001-10-*	4.5	9.0	13.0
.0012	1306DFR-3-.0012-4-*	4.0	9.0	10.5	.0012	1306DFR-3-.0012-6.3-*	4.0	9.0	10.5	.0012	1306DFR-3-.0012-10-*	4.5	9.5	13.0
.0015	1306DFR-3-.0015-4-*	4.5	9.0	10.5	.0015	1306DFR-3-.0015-6.3-*	4.5	9.5	10.5	.0015	1306DFR-3-.0015-10-*	5.0	10.0	13.0
.0022	1306DFR-3-.0022-4-*	4.5	9.0	10.5	.0022	1306DFR-3-.0022-6.3-*	4.5	9.5	13.0	.0022	1306DFR-3-.0022-10-*	5.5	11.0	13.0
.0027	1306DFR-3-.0027-4-*	4.5	9.0	10.5	.0027	1306DFR-3-.0027-6.3-*	5.0	10.0	13.0	.0027	1306DFR-3-.0027-10-*	5.5	11.5	13.0
.0039	1306DFR-3-.0039-4-*	4.5	9.0	10.5	.0039	1306DFR-3-.0039-6.3-*	5.5	11.0	13.0	.0039	1306DFR-3-.0039-10-*	6.0	12.5	13.0
.0047	1306DFR-3-.0047-4-*	4.5	9.5	10.5	.0047	1306DFR-3-.0047-6.3-*	6.0	12.0	13.0	.0047	1306DFR-3-.0047-10-*	5.5	11.0	18.5
.0056	1306DFR-3-.0056-4-*	4.5	9.5	13.0	.0056	1306DFR-3-.0056-6.3-*	6.5	12.5	13.0	.0056	1306DFR-3-.0056-10-*	6.0	11.5	18.5
.0068	1306DFR-3-.0068-4-*	5.0	10.0	13.0	.0068	1306DFR-3-.0068-6.3-*	5.0	10.0	18.5	.0068	1306DFR-3-.0068-10-*	6.0	12.5	18.5
.0082	1306DFR-3-.0082-4-*	5.5	10.5	13.0	.0082	1306DFR-3-.0082-6.3-*	5.5	11.0	18.5	.0082	1306DFR-3-.0082-10-*	7.0	13.0	18.5
.01	1306DFR-3-.01-4-*	5.5	11.0	13.0	.01	1306DFR-3-.01-6.3-*	6.0	12.0	18.5	.01	1306DFR-3-.01-10-*	7.5	14.0	18.5
.012	1306DFR-3-.012-4-*	6.0	12.0	13.0	.012	1306DFR-3-.012-6.3-*	6.5	12.5	18.5	.012	1306DFR-3-.012-10-*	8.0	14.5	18.5
.015	1306DFR-3-.015-4-*	6.5	12.5	13.0	.015	1306DFR-3-.015-6.3-*	7.0	13.0	18.5	.015	1306DFR-3-.015-10-*	9.0	16.5	18.5
.018	1306DFR-3-.018-4-*	5.5	11.0	18.5	.018	1306DFR-3-.018-6.3-*	7.5	13.5	18.5	.018	1306DFR-3-.018-10-*	8.0	14.0	26.0
.022	1306DFR-3-.022-4-*	6.0	12.0	18.5	.022	1306DFR-3-.022-6.3-*	8.0	14.5	18.5	.022	1306DFR-3-.022-10-*	8.5	15.5	26.0
.027	1306DFR-3-.027-4-*	6.5	12.5	18.5	.027	1306DFR-3-.027-6.3-*	7.5	13.5	26.0	.027	1306DFR-3-.027-10-*	9.0	16.5	26.0
.033	1306DFR-3-.033-4-*	7.5	13.5	18.5	.033	1306DFR-3-.033-6.3-*	8.5	15.5	26.0	.033	1306DFR-3-.033-10-*	9.5	18.0	26.0
.039	1306DFR-3-.039-4-*	8.0	14.0	18.5	.039	1306DFR-3-.039-6.3-*	9.0	16.5	26.0	.039	1306DFR-3-.039-10-*	10.0	19.0	26.0
.047	1306DFR-3-.047-4-*	8.5	15.5	18.5	.047	1306DFR-3-.047-6.3-*	9.5	18.0	26.0	.047	1306DFR-3-.047-10-*	10.0	19.0	31.0
.056	1306DFR-3-.056-4-*	7.5	13.5	26.0	.056	1306DFR-3-.056-6.3-*	9.0	16.5	31.0	.056	1306DFR-3-.056-10-*	10.5	20.0	31.0
.068	1306DFR-3-.068-4-*	8.0	14.0	26.0	.068	1306DFR-3-.068-6.3-*	9.5	17.0	31.0	.068	1306DFR-3-.068-10-*	12.0	22.0	31.0
.082	1306DFR-3-.082-4-*	8.5	15.5	26.0	.082	1306DFR-3-.082-6.3-*	10.0	19.0	31.0	.082	1306DFR-3-.082-10-*	12.5	23.0	31.0
.1	1306DFR-3-.1-4-*	9.0	16.5	26.0	.1	1306DFR-3-.1-6.3-*	10.5	20.0	31.0	.1	1306DFR-3-.1-10-*	15.0	27.0	31.0
.12	1306DFR-3-.12-4-*	9.5	18.0	26.0	.12	1306DFR-3-.12-6.3-*	11.5	22.0	31.0	.12	1306DFR-3-.12-10-*	13.5	24.0	36.0
.15	1306DFR-3-.15-4-*	9.5	18.0	31.0	.15	1306DFR-3-.15-6.3-*	14.0	24.0	31.0	.15	1306DFR-3-.15-10-*	15.0	27.0	36.0
.18	1306DFR-3-.18-4-*	10.0	19.0	31.0	.18	1306DFR-3-.18-6.3-*	13.0	23.0	36.0	.18	1306DFR-3-.18-10-*	14.5	26.0	44.0
.22	1306DFR-3-.22-4-*	11.5	20.0	31.0	.22	1306DFR-3-.22-6.3-*	15.0	26.0	36.0	.22	1306DFR-3-.22-10-*	16.0	28.0	44.0
.27	1306DFR-3-.27-4-*	12.5	22.0	31.0	.27	1306DFR-3-.27-6.3-*	16.0	28.0	36.0					
.33	1306DFR-3-.33-4-*	13.0	23.0	36.0	.33	1306DFR-3-.33-6.3-*	16.0	28.0	44.0					
.39	1306DFR-3-.39-4-*	13.5	25.0	36.0	.39	1306DFR-3-.39-6.3-*	16.5	30.0	44.0					
.47	1306DFR-3-.47-4-*	15.0	27.0	36.0	.47	1306DFR-3-.47-6.3-*	18.0	32.0	44.0					
.56	1306DFR-3-.56-4-*	14.0	25.0	44.0										
.68	1306DFR-3-.68-4-*	15.0	27.0	44.0										
.82	1306DFR-3-.82-4-*	16.5	30.0	44.0										
1.0	1306DFR-3-1.0-4-*	18.0	32.0	44.0										

* - Please insert appropriate tolerance code