

DC Feedthrough Capacitors - Class Y4

# DFC Series



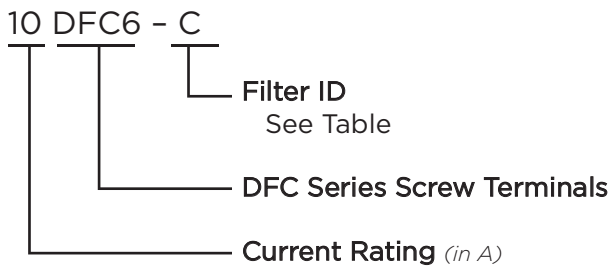
Component Recognized by  
UL to US and Canadian Requirements



## DFC Series

- DC feedthrough capacitors
- Current ratings from 10 to 300A
- Designed to meet the very stringent safety requirements of EN132400 class Y4 including the 2500V pulse test
- Custom versions available

## Ordering Information



## Filter Options / Specifications

Filter ID	Value (nF)
C	10
G	47
H	100
N	470
P	1000
Q	3300
R	4700
T	8000

## Specifications

Rated Voltage (max):	130 VDC
Rated Current:	10 to 300A
Test Voltage (two seconds):	2500 VDC
Capacitor Class (EN132400):	Designed to meet Y4
Pulse Test (EN132400):	2500V Peak
Insulation Resistance (within 1 minute):	
	For C < 0.33µF, R > 15000MΩ
	For C > 0.33µF, RC(MΩ*µF) > 5000s
Operating Ambient Temperature Range (at rated current I <sub>r</sub> ):	
	10 to 200A: -40°C to +60°C
	250 & 300A: -40°C to +40°C
Category Temperature Range:	-40°C to +85°C
Current Derating Above Ambient:	
	10-200A: For temperature, $\theta I_{\theta} = IR \sqrt{(85-\theta)/25}$
	250 & 300A: For temp., $\theta I_{\theta} = IR \sqrt{(85-\theta)/45}$
Climatic Category:	40/85/21
MTBF:	> 10 million hours typical
Insulating Materials Flammability Rating:	UL94V-0
Case & Terminal Material:	Nickel Plated Brass

**DC Feedthrough Capacitors - Class Y4** *(continued)*

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## Case Style



### T1 - Terminal Thread

Part No.	Thread	Torque max. in.lb.
10DFC6-C	M3	4
16DFC6-C/G/H/N	M4	11
32DFC6-C/G/H/N	M4	11
63DFC6-C/G/H/N	M6	22
100FDC6-G/H/N/P	M8	44
200DFC6-H/N/P/R	M10	71
250DFC6-P/Q/T	M12	97
300DFC6-P/Q/T	M16	177

### T2 - Mounting Thread

Part No.	Thread	Torque max. in.lb.
10DFC6-C	M10 x 1	27
16DFC6-C/G/H	M12 x 1	35
32DFC6-C/G/H	M12 x 1	35
63DFC6-C/G/H	M16 x 1	62
16DFC6-N	M20 x 1	89
32DFC6-N	M20 x 1	89
63DFC6-N	M20 x 1	89
100DFC6-G/H/N	M24 x 1	124
100DFC6-P	M24 x 1	124
200DFC6-H/N/P	M24 x 1	124
200FFC6-R	M27 x 1.5	142

## Case Dimensions

Part No.	A	B	C	D	E	F
	$\frac{\pm.04}{1}$	$\frac{\pm.02}{0.5}$	$\frac{\pm.08}{2}$	$\frac{\pm.04}{1}$	$\frac{\pm.08}{2}$	(max)
10DFC6-C	<b>2.24</b> 57	<b>0.59</b> 15	<b>0.71</b> 18	<b>0.39</b> 10	<b>0.63</b> 16	<b>0.51</b> 13
16DFC6-C	<b>2.48</b> 63	<b>0.79</b> 20	<b>0.71</b> 18	<b>0.47</b> 12	<b>0.71</b> 18	<b>0.67</b> 17
16DFC6-G	<b>2.95</b>	<b>0.79</b>	<b>1.18</b>	<b>0.47</b>	<b>0.71</b>	<b>0.67</b>
16DFC6-H	75	20	30	12	18	17
16DFC6-N	<b>3.23</b> 82	<b>1.26</b> 32	<b>1.30</b> 33	<b>0.63</b> 16	<b>0.71</b> 18	<b>1.06</b> 27
32DFC6-C	<b>2.48</b> 63	<b>0.79</b> 20	<b>0.71</b> 18	<b>0.47</b> 12	<b>0.71</b> 18	<b>0.67</b> 17
32DFC6-G	<b>2.95</b>	<b>0.79</b>	<b>1.18</b>	<b>0.47</b>	<b>0.71</b>	<b>0.67</b>
32DFC6-H	75	20	30	12	18	17
32DFC6-N	<b>3.23</b> 82	<b>1.26</b> 32	<b>1.30</b> 33	<b>0.63</b> 16	<b>0.71</b> 18	<b>1.06</b> 27
63DFC6-C	<b>3.78</b>	<b>0.98</b>	<b>1.18</b>	<b>0.55</b>	<b>1.02</b>	<b>0.87</b>
63DFC6-G	96	25	30	14	26	22
63DFC6-H	<b>3.98</b>	<b>1.26</b>	<b>1.30</b>	<b>0.63</b>	<b>1.02</b>	<b>1.06</b>
63DFC6-N	101	32	33	16	26	27
100DFC6-G	<b>4.45</b>	<b>1.26</b>	<b>1.30</b>	<b>0.63</b>	<b>1.26</b>	<b>1.06</b>
100DFC6-H	113	32	33	16	32	27
100DFC6-N	<b>5.24</b>	<b>1.50</b>	<b>1.97</b>	<b>0.75</b>	<b>1.26</b>	<b>1.06</b>
100DFC6-P	133	38	50	19	32	27
200DFC6-H	<b>5.12</b>	<b>1.26</b>	<b>1.30</b>	<b>0.75</b>	<b>1.57</b>	<b>1.06</b>
200DFC6-N	130	32	33	19	40	27
200DFC6-P	<b>5.79</b>	<b>1.50</b>	<b>1.97</b>	<b>0.75</b>	<b>1.57</b>	<b>1.06</b>
200DFC6-R	147	38	50	19	40	27
200DFC6-R	<b>6.50</b>	<b>2.13</b>	<b>2.68</b>	<b>0.75</b>	<b>1.57</b>	<b>1.57</b>
250DFC6-P	165	54	68	19	40	40
300DFC6-P	<b>5.83</b>	<b>2.13</b>	<b>1.65</b>	<b>0.75</b>	<b>1.81</b>	<b>1.57</b>
250DFC6-Q	148	54	42	19	46	40
300DFC6-Q	<b>6.30</b>	<b>2.13</b>	<b>2.13</b>	<b>0.75</b>	<b>1.81</b>	<b>1.57</b>
250DFC6-T	160	54	54	19	46	40
300DFC6-T	<b>7.01</b>	<b>2.13</b>	<b>2.83</b>	<b>0.75</b>	<b>1.81</b>	<b>1.57</b>
250DFC6-T	178	54	72	19	46	40

**DC Feedthrough Capacitors - Class Y4** *(continued)*

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## Available Part Numbers

10DFC6-C	32DFC6-H	100DFC6-H	250DFC6-P
16DFC6-C	32DFC6-N	100DFC6-N	250DFC6-Q
16DFC6-G	63DFC6-C	100DFC6-P	250DFC6-T
16DFC6-H	63DFC6-G	200DFC6-H	300DFC6-P
16DFC6-N	63DFC6-H	200DFC6-N	300DFC6-Q
32DFC6-C	63DFC6-N	200DFC6-P	300DFC6-T
32DFC6-G	100DFC6-G	200DFC6-R	

## Performance Data

### Typical Insertion Loss – Line to Ground in 50 Ohm circuit

Filter ID	Frequency – MHz							
	0.01	0.03	0.1	0.3	1	10	100	1000
C	-	-	-	-	3	21	45	70
G	-	-	2	6	15	34	50	90
H	-	2	5	11	20	40	65	90
N	6	9	15	22	33	33	90	90
P	10	15	24	32	42	50	90	90
Q	13	21	31	42	50	58	90	90
R	18	26	36	45	42	70	90	90
T	22	31	41	52	62	82	90	90