

EMI/RFI

FILTER AND DISCOIDAL CAPACITORS



UNION TECHNOLOGY CORP.

..... UTC filters are designed for continuous operation at the rated voltage at the operating temperature specified by the MIL-STD. The temperature range is -55°C to $+125^{\circ}\text{C}$ at the rated voltage.

UTC filters will meet or exceed all the requirements of MIL-F-15733 and MIL-F-28861.



EMI/RFI Filter

UTC FILTER SELECTION GUIDE

Application:

Filters are used in circuits where both source and load impedance are high. Used on low impedance circuits will significantly reduce the filter's performance. L-section filters are used when the interfering source has a low or varying impedance. The discoidal multi-layer construction completely isolates the input from the output making these filters effective at very high frequencies. Typical applications are communication equipment, measuring and test equipment, microwave repeaters and for RF bypassing to ground.

CASE STYLE		SOLDER IN	4-40 BOLT	6-32 BOLT	8-32 BOLT	12-32 BOLT	1/4 - 28 THREAD	5/16-24 THREAD
DIELECTRIC	WVDC	MAXIMUM CAPACITANCE						
BY NPO COG	50 V	1200 pF	1200 pF	1200 pF	5,600 pF	5,600 pF	.068 uF*	.270 uF*
	100 V	680 pF	680 pF	680 pF	3,300 pF	3,300 pF	.047 uF*	.180 uF*
	200 V	470 pF	470 pF	470 pF	1,800 pF	1,800 pF	.033 uF*	.120 uF*
	500 V	270 pF	270 pF	270 pF	560 pF	560 pF	.010 uF*	.033 uF*
BX X7R	50 V	33,000 pF	33,000 pF	33,000 pF	.120 uF	.120 uF	1.80 uF*	6.80 uF*
	100 V	18,000 pF	18,000 pF	18,000 pF	.068 uF	.068 uF	1.00 uF*	4.70 uF*
	200 V	6,800 pF	6,800 pF	6,800 pF	.033 uF	.033 uF	.68 uF*	3.00 uF*
	500 V	3,300 pF	3,300 pF	3,300 pF	.010 uF	.010 uF	.22 uF*	1.00 uF*

* For PI filter double the capacitance

Contact factory for other variation which include size, capacitance, or other custom configurations.

ORDERING TERMINOLOGY

F G B23 T X7R105 V A



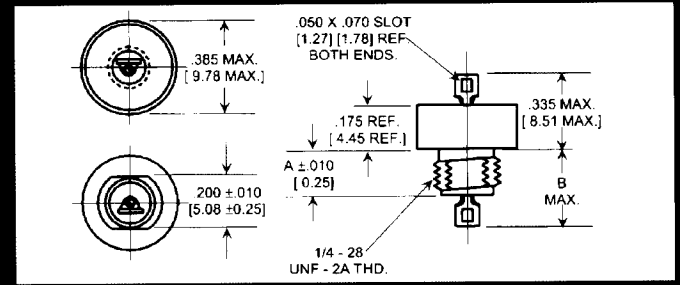
WORKING VOLTAGE	PLATING	TC	TOLERANCE	TEST LEVEL
G 50 Vdc	T TIN	NPO	K +/- 10%	A ELECTRICAL SCREENING
B 100 Vdc	S SILVER	X7R	M +/- 20%	B GROUP A INSPECTION
R 200 Vdc	G GOLD		P +/- 100%-0%	C GROUP B INSPECTION
S 500 Vdc			V GMV	

CASE STYLE

A	SOLDER-IN	.128 DIA. 10	.156 DIA. 11	.200 DIA. 12	.375 DIA. 14
B	4-40 BOLT	.032 DIA. LEAD 21		.040 DIA. LEAD 22	
C	6-32 BOLT	31		32	
D	8-32 BOLT	41		42	
E	12-32 BOLT	51		52	
F	1/4-28 THREAD	.187 THREAD LENGTH 61		.312 THREAD LENGTH 62	
G	5/16-24 THREAD	.312 THREAD LENGTH 70			

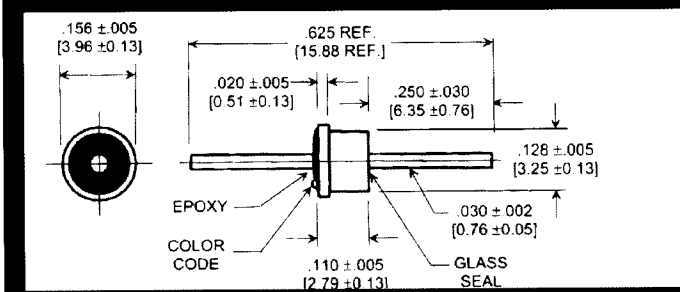
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L-STYLE BUTTON FILTER 50VDC - 200VDC

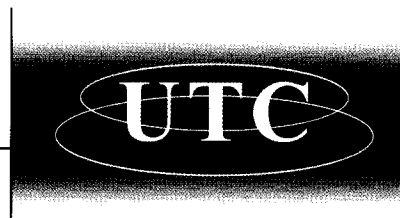


SPECIFICATION												
UTC PART NO.	CASE STYLE	CAP uF	Vdc	CURRENT	PEAK VOLTAGE	Minimum full load insertion loss (dB) Per MIL-STD-220 at indicated temperature						Indicated Temperature
						30 KHZ	150 KHZ	300 KHZ	1 MHZ	10 MHZ	1 GHZ	
FGF61TX7R145VA	1/4 - 28	1.4	50	15	200	15	28	34	44	60	70	25 C
FGF61TX7R145VA	1/4 - 28	1.4	50	15	200	15	28	34	44	60	70	
FBF61TX7R704VA	1/4 - 28	.7	100	15	200	9	22	29	39	55	70	-55 C to +125 C
FBF61TX7R704VA	1/4 - 28	.7	100	15	200	9	22	29	39	55	70	
FRF61TX7R254VA	1/4 - 28	.25	200	10	400	-	15	32	50	70	70	
FSF61TX7R154VA	1/4 - 28	.15	500	10	800	-	11	33	44	54	70	

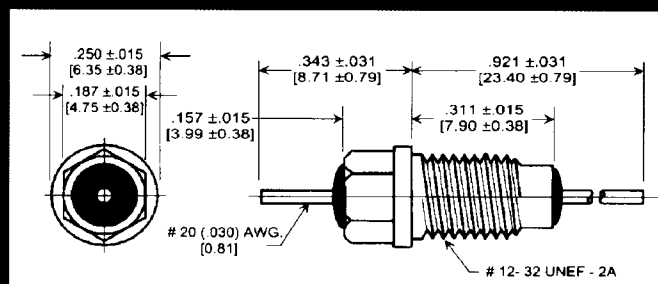
EYLET FEED-THRU FILTER 50VDC - 200VDC



SPECIFICATION												
UTC PART NO.	CASE STYLE	CAP pF	Vdc	CURRENT	PEAK VOLTAGE	Minimum full load insertion loss (dB) Per MIL-STD-220 at indicated temperature						Indicated Temperature
						1MHZ	10MHZ	100MHZ	200MHZ	1GHZ	10GHZ	
FGA10TX7R473VA	SOLDER-IN	47000	50	15	200	16	37	52	60	70	70	25 C
FGA10TX7R273VA	SOLDER-IN	27000	50	15	200	12	32	48	56	70	70	
FGA10TX7R103VA	SOLDER-IN	10000	50	15	200	-	23	42	52	70	70	-55 C to +125 C
FBA10TX7R473VA	SOLDER-IN	47000	100	10	400	-	14	30	38	49	68	
FRA10TX7R472VA	SOLDER-IN	4700	200	10	400	-	-	13	20	32	50	
FRA10TX7R102VA	SOLDER-IN	1000	200	10	400	-	5	21	41	55	60	

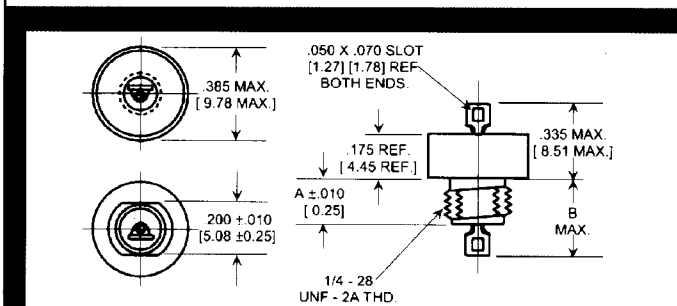


BOLT STYLE FEED-THRU FILTER 50VDC - 200VDC



UTC PART NO.	CASE STYLE	CAP pF	Vdc	CURRENT	Minimum full load insertion loss (dB) Per MIL-STD-220 at indicated temperature				
					10MHZ	100MHZ	200MHZ	1GHZ	10GHZ
FGB21TX7R203VA	4-40	20000	50	15	30	50	56	70	70
FRB21TX7R272VA	4-40	2700	200	15	12	32	38	52	70
FBB21TX7R472VA	4-40	4700	100	10	37	52	60	70	70
FBD31TX7R503VA	8-32	50000	100	10	39	57	63	70	70
FRD31TX7R502VA	8-32	5000	200	15	16	36	38	56	70
FRD31TX7R103VA	8-32	10000	200	15	21	38	40	60	70
FBB21TX7R123VA	4-40	12000	100	15	25	32	45	50	64
FGB21TX7R273VA	4-40	27000	50	10	32	48	56	70	70
FRB21TX7R102VA	4-40	1000	200	10	-	22	28	42	64

PI-STYLE FILTER 50VDC - 200VDC



UTC PART NO.	CASE STYLE	CAP uF	Vdc	CURRENT	Minimum full load insertion loss (dB) Per MIL-STD-220 at indicated temperature					
					30KHZ	150KHZ	300KHZ	1MHZ	10MHZ	1GHZ
FGF61TX7R504VA	1/4-28	.5	50	10	47	70	70	80	80	80
FGF61TX7R105VA	1/4-28	1.0	50	.25	19	59	70	70	80	80
FGF61TX7R205VA	1/4-28	2.0	50	3	15	34	55	70	70	70
FBF61TX7R145VA	1/4-28	1.4	100	10	10	22	25	60	60	70
FRF61TX7R254VA	1/4-28	.25	200	5	-	-	22	56	70	70

Capacitors



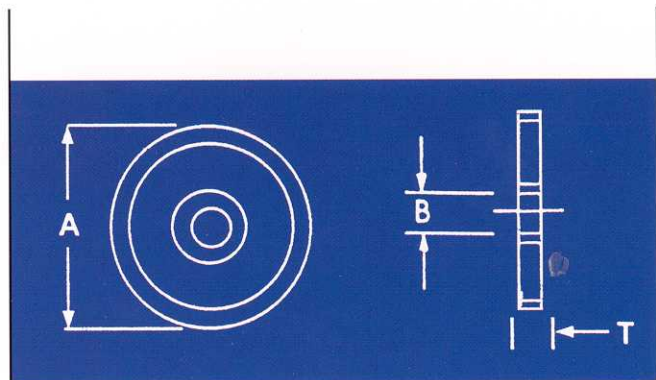
UTC DISCOIDAL SELECTION GUIDE

Application:

Discoidal feed thru capacitors of multilayer construction exhibits very low impedance to ground resulting in optimum EMI suppression. The alternate layered construction provides very low series resistance and series inductance, which allows for low impedance at high frequencies. Chassis or bulkhead mounted, either individually or in a cylindrical can (C, L, Pi, T filters) provides very good isolation of the input signal from the output of the capacitor or filter.

CUSTOM SIZES:

- Outside Diameter (OD) of 0.070 and larger are available
- All Inside Diameter (ID) are available.

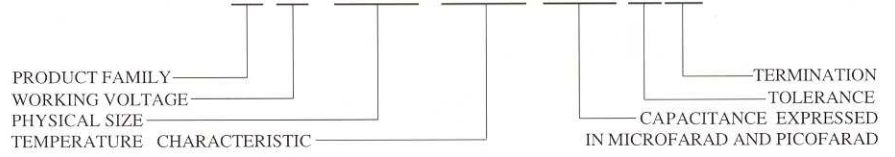


DIMENSIONS		0703	0904	1404	2105	2705	3505	3905	6006
A (OD)		.070+-.004	.095+-.005	.145+-.010	.210+-.010	.270+-.010	.345+-.010	.390+-.010	.600+-.015
B (ID)		.030+-.004	.038+-.004	.038+-.004	.050+-.005	.050+-.004	.050+-.004	.050+-.005	.060+-.005
T(MAX)		0.035	.060	.060	.080	.100	.100	.120	.150
TC	WVDC	MAXIMUM CAPACITANCE AVAILABLE							
NPO	50 v	680 pF	1200 pF	5,600 pF	.021 uF	.033 uF	.068 uF	.082 uF	.270 uF
	100 v	470 pF	680 pF	3,300 pF	.015 uF	.022 uF	.047 uF	.056 uF	.180 uF
	200 v	220 pF	470 pF	1,800 pF	8,200 pF	.015 uF	.033 uF	.039 uF	.120 uF
	500 v	100 pF	270 pF	560 pF	2,700 pF	5,600 pF	0.10 uF	.012 uF	.033 uF
	1000 v	56 pF	180 pF	330 pF	1,800 pF	3,300 pF	6,800 pF	8,200 pF	.022 uF
X7R	50 V	10,000 pF	33,000 pF	.120 uF	.39 uF	.82 uF	1.80 uF	2.0 uF	6.80 uF
	100 V	6,800 pF	18,000 pF	.068 uF	.15 uF	.47 uF	1.00 uF	1.2 uF	4.70 uF
	200 V	2,200 pF	6,800 pF	.033 uF	.10 uF	.33 uF	.68 uF	.82 uF	3.00 uF
	500 V	820 pF	3,300 pF	.010 uF	.033 uF	.18 uF	.22 uF	.33 uF	1.00 uF

Contact factory for other variations which include size, voltage, terminations, dielectric and any other custom configurations.

ORDERING TERMINOLOGY

D G 3505 X7R 105 V P



VOLTAGE		TEMPERATURE CHARACTERISTIC	TOLERANCE	TERMINATION
G	50 V	X7R	J	P PALLADIUM SILVER
B	100 V		K	
R	200 V		M	
S	500 V		Z	
T	1000 V		P	
		NPO	V	GMV

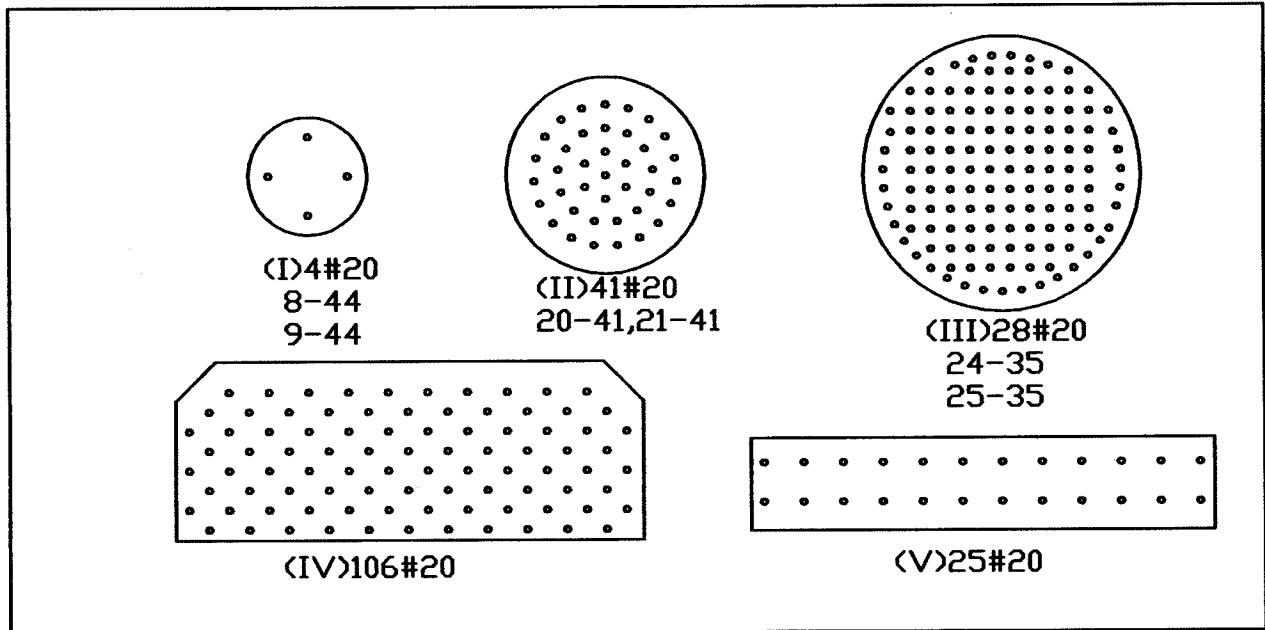
PLANAR CAPACITOR ARRAY

MIL-STD-1651A
 MIL-STD-1560A
 MIL-STD-1669
 MIL-STD-1554
 MIL-C-24308 SUB "D"
 MIL-C-83723 MICROSTYLE

Electromagnetic interference (EMI) can effect the operation of electronic equipment through connectors attached the interface cable. Filter arrays are designed to reduce such emissions by acting as low - pass filter that restrict high frequency currents at the cable connector. Consult manufacturer for various configuration and number of pins for filter array to fit your requirements.

TYPE CONTACT- PIN LAYOUTS

STYLE	TYPE	CONTACTS	CONTACT SIZE
I	CIRCULAR	4	# 20
II	CIRCULAR	41	# 20
III	CIRCULAR	128	# 22
IV	SUB D	9-78	.043-.053
V	ARINC	106	#20



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