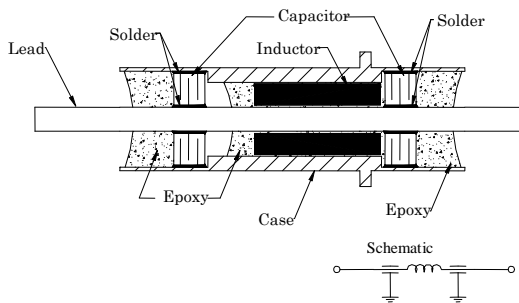


EMI FILTERS “PI” TYPE

Filter Pin - Pi-Section, Solder Mount, Epoxy Sealed

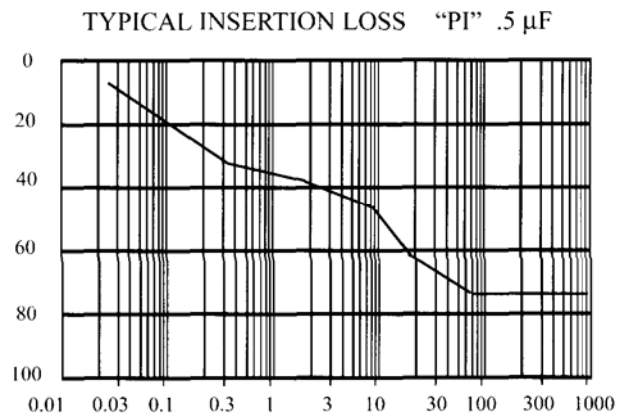
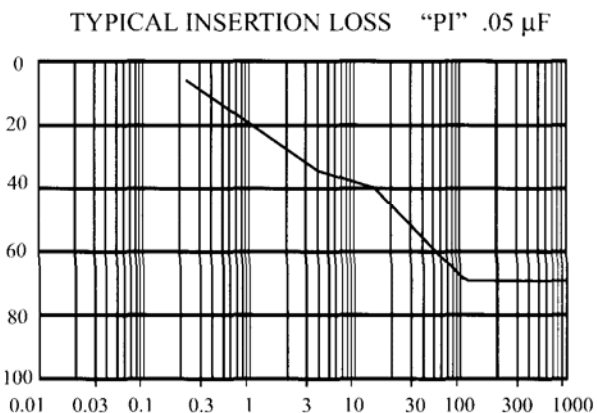


FEATURES:

- Similar to MIL-F-15733/33 and /62.
- Epoxy resin encapsulated.
- Discoidal capacitor construction.
- Superior resistance to mechanical/thermal stress.
- Solder-in style.
- Excellent input to output signal isolation.

APPLICATIONS:

PA&E's filter pins are designed with discoidal capacitors utilizing highly reliable multi layer dielectric construction in order to minimize the effect of mechanical/thermal stress during and after soldering installation. The PI circuit contains two capacitive elements and one inductive element which will provide typical insertion loss of 60 dB per decade. A PI filter is a symmetric filter that presents a low impedance to both source and load, especially at high frequencies. It is best suited for systems where the source and load impedance are relatively high and where no attenuation is allowed in the low pass band, but sharp roll-off is desired beyond the cut-off frequency. Due to its multiple element construction, PI filters are also recommended for circuits where the source and load impedances vary from low to high depending on the circuit functions. If one of the impedances become low, the filter will function as an LC section and if both impedances get reduced, the PI filter will still function as an L section. Typical of these applications are signal or pulse transmission lines found in telecommunications, telemetry, and radar systems.



FILTER PIN

EMI FILTERS “PI” TYPE

GENERAL SPECIFICATIONS

Capacitance / Tolerance:	Measured @ 1 KHz and .1-1 Vrms, 25°C / -0% +100%
Dissipation Factor:	2.5% max @ 1 KHz and .1-1 Vrms, 25°C
Insulation Resistance:	10 ³ MΩ or 1000 MΩ - mF, whichever is less @ 25°C, WVDC
Working Voltage:	50 VDC to 300 VDC
Dielectric Withstanding Voltage:	250 % of WVDC min. @ 25°C for 5±1 sec, 50 mA max chg. Current
Volt-Temperature Limit:	+10% -30% @ WVDC and -55°C to +125°C
Current Rating:	10 Amp
DC Resistance:	.005Ω max.
Insertion Loss:	Measured per Mil-STD-220, IL between any two adjacent specified frequency shall be that of the lower of the two frequencies in order to accommodate resonant dips.
Operating Temperature:	-55°C to +125°C
Storage Temperature:	-65°C to +150°C
Materials: Case	Brass, ½ hard per QQ-B-626 (composition #22)
Terminals	Copper per ASTM B-170 / phosphor-bronze optional
Finish: Case	Silver per QQ-S-365 / Gold Optional
Terminals	Silver per QQ-S-365 / Gold Optional
Applicable MIL Specifications:	Mil-F-15733
Environmental Test Spec:	Mil-STD-202
Thermal Shock:	Method 107, Condition A except step 3 @ 125°C
Salt Spray:	Method 101, Condition B
Barometric Pressure:	Method 105, Condition B
Resistance to Soldering Heat:	Method 210, Condition B
Seal:	Not Applicable
Vibration:	Method 204, Condition D
Shock:	Method 213, Condition I
Terminal Strength:	Method 211, Condition A
Solderability:	Method 208
Life:	Method 108, Condition D

INSTALLATION GUIDE

In order to reduce the possibility of damage as a result of thermal stress caused by the application of soldering heat, adhere to following procedure:

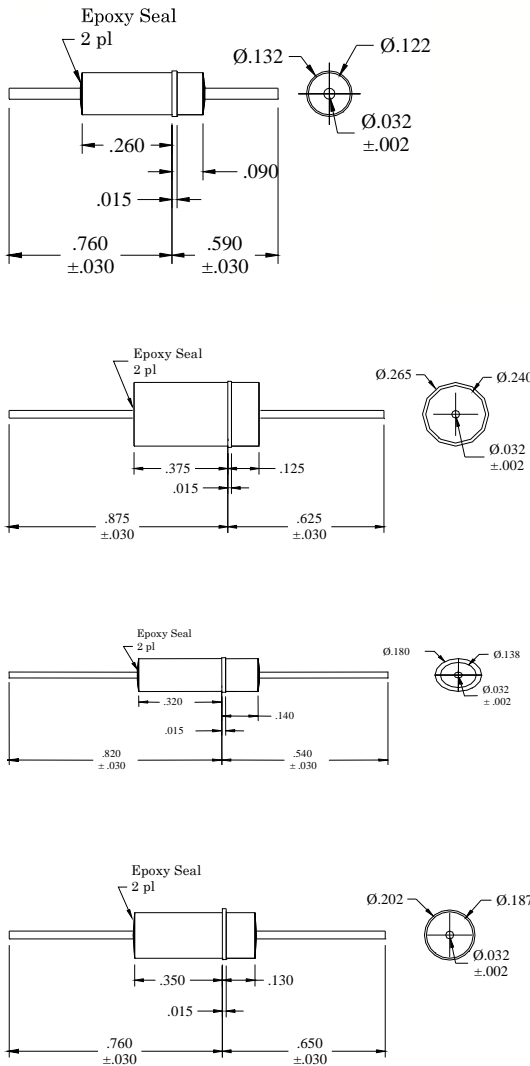
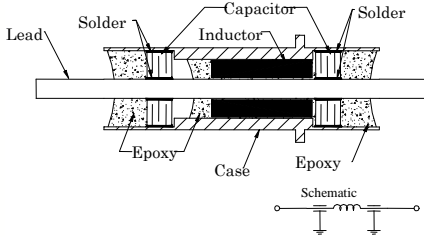
- 1) Preheat the part and the chassis to 125-140°C for 5 minutes.
- 2) Use silver bearing solder preforms such as 60/38/2 % tin/lead/silver or 60/40 % tin/lead.
- 3) Apply the heat in the immediate vicinity of the filter with sufficient magnitude to reflow the solder preform and only for the minimum time required to make a good solder connection.
- 4) Allow the assembly to cool at the rate similar to that of the preheat operation.
- 5) Avoid bending or flexing terminals at the point of exit from the glass or epoxy seal to preserve the integrity of the seal and/or ceramic capacitor.
- 6) Solder connections to the terminals should be performed with temperatures not exceeding 230°C, placing a heat sink between soldering point and filter body whenever possible.

EMI FILTERS

“PI” TYPE, 10 AMP, SOLDER MOUNT, EPOXY SEALED

FILTER PIN

Filter Pin - Pi-Section, Solder Mount, Epoxy



FILTER DIVISION PART NUMBER	WORKING VOLTAGE (VDC)	MIN CAP μ F	MINIMUM INSERTION LOSS (dB) Per MIL-STD-220					
			1 MHz	10 MHz	100 MHz	200 MHz	1 GHz	10 GHz
6416-VS95-503**	50	.05	15	36	70	70	70	70
6416-VS95-363**	50	.036	12	30	65	70	70	70
6424-VS95-223**	100	.022	8	26	65	70	70	70
6426-VS95-153**	100	.015	-	20	60	70	70	70
6436-VS95-103**	200	.01	-	15	55	70	70	70
6436-VS95-502**	200	.005	-	10	48	65	70	70
6416-XE95-104**	50	.1	20	70	70	70	70	70
6416-XE95-503**	50	.05	15	36	70	70	70	70
6426-XE95-363**	100	.036	12	30	65	70	70	70
6426-XE95-223**	100	.022	8	26	65	70	70	70
6436-XE95-153**	200	.015	-	20	60	70	70	70
6436-XE95-103**	200	.01	-	15	55	70	70	70
6416-YT95-204**	50	.2	25	42	70	70	70	70
6426-YT95-104**	100	.1	20	40	70	70	70	70
6436-YT95-503**	200	.05	15	36	70	70	70	70
6436-YT95-363**	200	.036	12	30	65	70	70	70
6466-YT95-223**	300	.022	8	26	65	70	70	70
6466-YT95-103**	300	.01	-	15	55	70	70	70
6416-ZF95-504**	50	.5	34	44	70	70	70	70
6426-ZF95-204**	100	.2	25	42	70	70	70	70
6436-ZF95-104**	200	.1	20	40	70	70	70	70
6466-ZF95-503**	300	.05	15	36	70	70	70	70
6466-ZF95-363**	300	.036	12	30	65	70	70	70
6466-ZF95-223**	300	.022	8	26	65	70	70	70

NOTE: .025 square lead available upon request.

Tolerances: \pm .010 and as noted.

Details subject to change without notice.

**** PART NUMBERS ARE INCOMPLETE. PLEASE SEE PAGE 49 TO COMPLETE THE NUMBERS.**