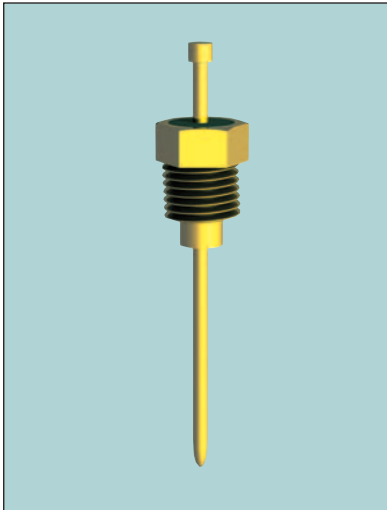


Bolt Style EMI Filters

SB Series – 8-32 Thread - Epoxy Sealed – Circuits Available – C, L, π



APPLICATIONS

The SB series provides improved filtering in the HF through MICROWAVE frequency spectrums from 1 MHz through 10 GHz. Also designed for mounting in a tapped bulkhead or with the standard nut and lockwasher provided, it is ideal for medium to high impedance circuits where large

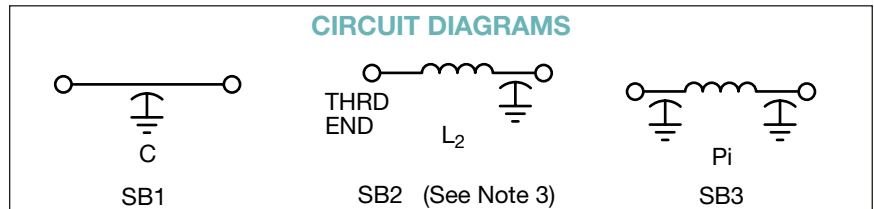
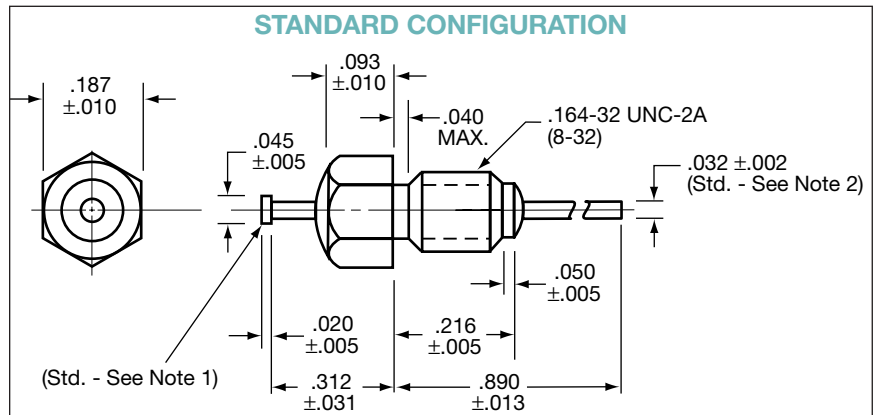
capacitance values are not practical. In the “L” and “ π ” section versions an internal ferrite bead element provides both inductance and series resistance (lossy characteristic) which improves the insertion loss rolloff to 40 dB and 60 dB per decade respectively.

CHARACTERISTICS

- Designed to meet or exceed the applicable portions of MIL-F-28861/7. See QPL listings.
- π design offers steeper insertion loss rolloff.
- Features rugged monolithic discoidal capacitor construction.
- Epoxy seal on both ends.

SPECIFICATIONS

1. Plating: Silver standard – Electro-tin or gold available
2. Material:
Case: Cold rolled steel
Leads: Half/hard copper
3. Operating Temperature Range:
-55°C to +125°C
4. Insulation Resistance:
At 25°C: 1,000 megohm-microfarad min., or 100,000 megohms min., whichever is less
At 125°C: 100 megohm-microfarad min., or 10,000 megohms min., whichever is less
5. Dielectric Withstanding Voltage (DWW):
R-level designs:
2.0 times rated DC voltage
Class B, Class S designs:
2.5 times rated DC voltage
6. DC Resistance (DCR): .01 ohm, maximum
7. Dissipation Factor (DF): 3% maximum
8. Rated DC Current: 10 Amps, maximum
9. Recommended Mounting Torque:
64 oz-in. \pm 4 oz-in.
10. Supplied with mounting nut and lockwasher - See Filter Design Guide Screw and Locking Washer Table
11. Insertion Loss for the “C”, “L” and “ π ” circuits are equivalent due to the saturation characteristic of the ferrite bead element at full rated current. At lower currents the “L” and “ π ” become much more effective.



millimeters (inches)	
0.05 (.002)	1.14 (.045)
0.13 (.005)	1.27 (.050)
0.18 (.007)	1.85 (.073)
0.25 (.010)	2.36 (.093)
0.33 (.013)	4.17 (.164)
0.38 (.015)	4.75 (.187)
0.51 (.020)	5.49 (.216)
0.64 (.025)	6.35 (.250)
0.76 (.030)	7.11 (.280)
0.79 (.031)	7.92 (.312)
0.81 (.032)	22.61 (.890)
1.02 (.040)	— —

(See Note 4)

Notes:

1. Nailhead standard, straight lead available.
2. Lead diameters other than .032" available.
3. All SB2 L-Section Filters have inductor (bead) at threaded end.
4. Metric equivalent dimensions given for information only.

Bolt Style EMI Filters

SB Series – 8-32 Thread - Epoxy Sealed – Circuits Available – C, L, π



SPECIFICATIONS

AVX P/N	CKT	CAP ¹	DC Voltage	DCR	Insertion Loss ² Per MIL-STD-220, +25°C					
					1 MHz	10 MHz	100 MHz	200 MHz	1 GHz	10 GHz
SB1C1-102	C	1000	50	.01	–	4	20	25	40	50
SB1C1-502	C	5000	50	.01	–	15	34	41	50	55
SB1C1-103	C	.01	50	.01	4	21	35	40	55	60
SB1C1-273	C	.027	50	.01	10	30	39	45	65	70
SB1C1-503	C	.05	50	.01	15	35	42	50	70	70
SB2C1-273	L2	.027	50	.01	10	30	50	54	65	70
SB2C1-503	L2	.05	50	.01	15	36	54	60	70	70
SB3C1-323	π	.032	50	.01	12	30	60	70	70	70
SB1A1-102	C	1000	100	.01	–	4	20	25	40	50
SB1A1-502	C	5000	100	.01	–	15	34	41	50	55
SB1A1-103	C	.01	100	.01	4	21	35	40	55	60
SB1A1-273	C	.027	100	.01	10	30	39	45	65	70
SB1A1-503	C	.05	100	.01	15	35	42	50	70	70
SB2A1-103	L2	.01	100	.01	4	21	35	38	65	70
SB2A1-273	L2	.027	100	.01	10	30	50	54	70	70
SB3A1-152	π	1500	100	.01	–	8	20	45	70	70
SB3A1-123	π	.012	100	.01	–	12	60	70	70	70
SB3A1-153	π	.015	100	.01	–	17	37	43	70	70
SB1B1-102	C	1000	200	.01	–	4	20	25	40	50
SB1B1-502	C	5000	200	.01	–	15	34	41	50	55
SB2B1-102	L2	1000	200	.01	–	4	20	27	45	70
SB2B1-502	L2	5000	200	.01	–	15	35	41	55	70
SB3B1-202	π	2000	200	.01	–	8	42	58	70	70

¹ Decimal point values indicate capacitance in microfarads.
Non-decimal point values indicate capacitance in picofarads.

² Insertion loss limits are based on theoretical values.
Actual measurements may vary due to internal capacitor resonances and other design constraints.