

# Cylindrical Style EMI Filters

GK Series – .375/.410 Dia.

Hermetically Sealed – Circuits Available – C, L,  $\pi$ , T



## APPLICATIONS

The GK series offers effective filtering from 30 KHz to 10 GHz. Glass sealed for hermeticity, this series is impervious to high moisture, solvents, or other severe environmental conditions commonly encountered in military applications. It is designed for bulkhead mounting in a slotted hole with nut and lockwasher supplied.

The “L” and “T” configurations are designed to provide effective attenuation over a wide range of circuit impedances. For current ratings under 10 Amps toroidal wound

inductor elements offer increased filter performance and protection against circuit transients. Data showing the actual inductance versus various levels of DC or AC bias current are available as well as the attenuation in any combination of source and load impedances.

Alternate lead configurations or special capacitance/inductance values may be ordered.

Custom packages or filter arrays utilizing the GK series can be furnished.

## CHARACTERISTICS

- .410 Dia. version (HK) meets or exceeds the applicable requirements of MIL-F-28861/2,/3,/4,/5. See QPL listing.
- Glass hermetic seal on both ends.
- Wound toroidal inductor used in current ratings up through 5 Amps. Ferrite bead inductor used in 10 and 15 Amp designs.
- High DC current rating: 15 Amps.
- High capacitance values available.

## SPECIFICATIONS

1. Case/Terminal Plating:  
Electro-tin standard – Silver or gold available
2. Material:  
Case: Brass standard – Steel available  
End Seal: Mild steel  
Terminals: Nickel-iron alloy
3. Operating Temperature Range:  
-55°C to +125°C
4. Electrical Characteristics:
  - A. Rated Voltage and Current: See chart
  - B. Insulation Resistance:  
At 25°C: 1,000 megohm-microfarad min., or 50,000 megohms min., whichever is less, at the rated DC voltage  
At 125°C: 100 megohm-microfarad min., or 5,000 megohms min., whichever is less
5. Marking:  
Standard Marking: AVX, AVX part number, rated current, voltage, lot code, schematic
6. Dielectric Withstanding Voltage (DWV):  
R-level designs:  
2.0 times rated DC voltage  
Class B, Class S designs:  
2.5 times rated DC voltage
7. Capacitance: Total capacitance listed in chart for each filter type is “guaranteed minimum value” (GMV)
8. Installation:  
A. Mounting Torque: 44 oz-in.  $\pm$  4 oz-in.  
B. Refer to “Installation, Handling, Hardware Options” section of the catalog.

NOTE: Schematic to indicate location of inductor (standard or reverse) for GK2 L-Section Filters.

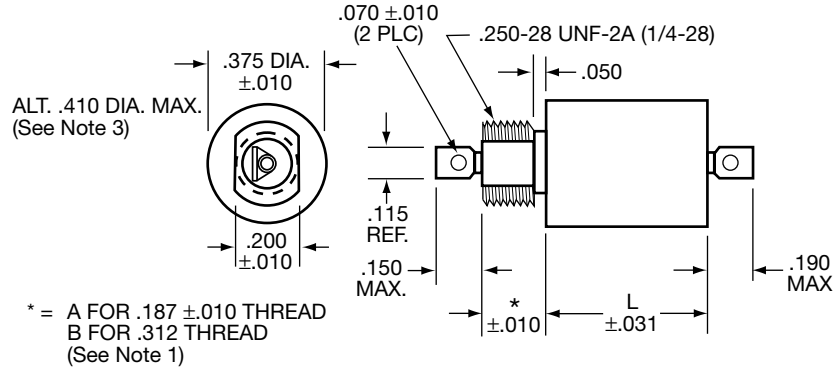
# Cylindrical Style EMI Filters

GK Series – .375/.410 Dia.

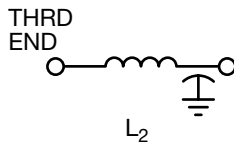
Hermetically Sealed – Circuits Available – C, L,  $\pi$ , T



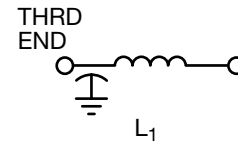
## STANDARD CONFIGURATION



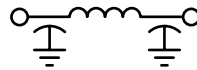
## CIRCUIT DIAGRAMS



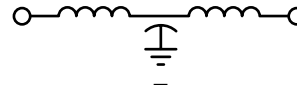
GK2 - Standard



GK2 - Reverse



GK3



GK4

### millimeters (inches)

0.25 (.010)	4.75 (.187)
0.79 (.031)	4.83 (.190)
1.27 (.050)	5.08 (.200)
1.78 (.070)	7.93 (.312)
2.92 (.115)	9.53 (.375)
3.81 (.150)	13.72 (.540)

(See Note 2)

### Notes:

1. Thread length option. Standard part numbers shown (e.g., GK2BA-S02) are .187" thread length. Optional .312 length available (e.g., GK2BB-S02).
2. Metric equivalent dimensions given for information only.

3. All QPL MIL-F-28861, and Hi-rel, will be supplied with .410 diameter (HK). See applicable slash sheet for mechanical dimensions.

\* = A for .187 ±.010 Thread  
B for .312 Thread  
(See Note 1)

# Cylindrical Style EMI Filters

## GK Series – .375/.410 Dia. – Hermetically Sealed –

### Circuits Available – L, $\pi$ , T



## SPECIFICATIONS

AVX P/N	Current AMP	CKT	L. dim	DCR	Insertion Loss <sup>2</sup> Per MIL-STD-220, +25°C							
					10 KHz	30 KHz	150 KHz	300 KHz	1 MHz	10 MHz	100 MHz	1 GHz
<b>50 VDC, 1.4 <math>\mu</math>F</b>												
GK2CA-S01	.06	L2	.540	12	16	44	70	70	70	70	70	70
GK2CA-S02	.1	L2	.540	10	15	34	62	70	70	70	70	70
GK2CA-S03	.15	L2	.540	4	7	24	52	64	70	70	70	70
GK2CA-S04	.25	L2	.540	4	6	25	53	65	70	70	70	70
GK2CA-S05	.30	L2	.540	0.5	5	16	35	45	66	70	70	70
GK2CA-S06	.45	L2	.540	0.3	5	15	33	44	65	70	70	70
GK2CA-S07	.50	L2	.540	1	5	16	41	54	70	70	70	70
GK2CA-S08	1.0	L2	.540	.25	5	15	31	42	63	70	70	70
GK2CA-S09	2.0	L2	.540	.063	5	15	28	35	51	70	70	70
GK2CA-S10	3.0	L2	.540	.027	5	15	28	34	45	70	70	70
GK2CA-S12	10	L2	.540	.008	5	15	28	34	44	52	65	65
GK3CA-P02	.1	$\pi$	.540	10	12	44	70	70	70	70	70	70
GK3CA-P04	.25	$\pi$	.540	4	8	36	70	70	70	70	70	70
GK3CA-P07	.5	$\pi$	.540	1	7	24	66	70	70	70	70	70
GK3CA-P08	1	$\pi$	.540	.25	5	15	54	70	70	70	70	70
GK3CA-P09	2	$\pi$	.540	.063	5	15	40	60	70	70	70	70
GK3CA-P10	3	$\pi$	.540	.027	5	15	30	50	70	70	70	70
GK3CA-P12	10	$\pi$	.540	.008	5	15	28	34	40	52	70	70
GK4CA-T08	1	T	1.020	.5	5	16	34	56	70	70	70	70
GK4CA-T09	2	T	1.020	.09	5	15	26	37	61	70	70	70
GK4CA-T16	4	T	1.020	.03	5	15	26	34	47	70	70	70
GK4CA-T12	10	T	1.020	.008	5	17	27	34	44	60	70	70

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

**NOTE:** All "L2" circuits are also available as "L1". Insertion loss and other parameters are identical. Only the part number changes (e.g., L2 = GK2LA-S04, L1 = GK2LA-R04).

# Cylindrical Style EMI Filters

## GK Series – .375/.410 Dia. – Hermetically Sealed –

### Circuits Available – L, $\pi$ , T



## SPECIFICATIONS

AVX P/N	Current AMP	CKT	L. dim	CAP <sup>1</sup>	DCR	Insertion Loss <sup>2</sup> Per MIL-STD-220, +25°C									
						15 KHz	30 KHz	50 KHz	100 KHz	150 KHz	300 KHz	1 MHz	10 MHz	100 MHz	1 GHz
<b>70 VDC, .7–1.4 <math>\mu</math>F</b>															
GK2NA-S02	.1	L2	.540	.7	1.7	9	20	29	41	48	60	70	70	70	70
GK2NA-S05	.3	L2	.540	.7	.77	6	15	23	35	42	54	70	70	70	70
GK2NA-S07	.5	L2	.540	.7	.36	5	12	19	29	36	48	69	70	70	70
GK2NA-S08	1	L2	.540	.7	.14	5	11	15	21	26	36	55	70	70	70
GK2NA-S10	3	L2	.540	.7	.05	5	10	14	20	24	31	45	70	70	70
GK2NA-S11	5	L2	.540	.7	.015	–	–	–	14	17	24	36	60	70	70
GK2NA-S12	10	L2	.540	.7	.008	–	10	14	20	24	30	40	40	64	70
GK3NA-P02	.1	$\pi$	.540	1.4	1.7	15	36	50	69	79	80	80	80	80	80
GK3NA-P05	.3	$\pi$	.540	1.4	.77	–	29	44	62	73	80	80	80	80	80
GK3NA-P07	.5	$\pi$	.540	1.4	.36	–	21	37	56	67	80	80	80	80	80
GK3NA-P08	1	$\pi$	.540	1.4	.14	–	–	20	46	57	75	80	80	80	80
GK3NA-P10	3	$\pi$	.540	1.4	.05	–	–	–	17	36	51	80	80	80	80
GK3NA-P11	5	$\pi$	.540	1.4	.015	–	–	–	–	16	38	75	80	80	80
GK3NA-P12	10	$\pi$	.540	1.4	.008	5	15	20	24	28	34	40	52	80	80
GK4NA-T08	1	T	1.020	.75	–	–	10	15	21	26	49	70	70	70	70
GK4NA-T09	2	T	1.020	.75	–	–	10	13	17	20	32	55	70	70	70
GK4NA-T16	4	T	1.020	.75	–	–	9	12	15	19	29	42	70	70	70
GK4NA-T12	10	T	1.020	.75	–	–	9	12	15	19	28	38	55	70	70

<sup>1</sup> Decimal point values indicate capacitance in microfarads.  
Non-decimal point values indicate capacitance in picofarads.

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

**NOTE:** All “L2” circuits are also available as “L1”.  
Insertion loss and other parameters are identical.  
Only the part number changes  
(e.g., L2 = GK2LA-S04, L1 = GK2LA-R04).

# Cylindrical Style EMI Filters

## GK Series – .375/.410 Dia. – Hermetically Sealed –

### Circuits Available – L, $\pi$



## SPECIFICATIONS

AVX P/N	Current AMP	CKT	L. dim	CAP <sup>1</sup>	DCR	Insertion Loss <sup>2</sup> Per MIL-STD-220, +25°C							
						10 KHz	30 KHz	150 KHz	300 KHz	1 MHz	10 MHz	100 MHz	1 GHz
<b>100 VDC, .45–1.4 <math>\mu</math>F</b>													
GK2AA-S01	.06	L2	.540	1.4	12	15	44	70	70	70	70	70	70
GK2AA-S02	.1	L2	.540	1.4	10	12	34	62	70	70	70	70	70
GK2AA-S03	.15	L2	.540	1.4	4	7	24	52	64	70	70	70	70
GK2AA-S05	.3	L2	.540	1.4	.5	–	14	35	45	66	70	70	70
GK2AA-S06	.45	L2	.540	1.4	.3	–	14	33	44	65	70	70	70
GK2AA-S07	.5	L2	.540	1.4	1	–	16	41	54	70	70	70	70
GK2AA-S09	2	L2	.540	1.4	.063	–	15	28	35	51	70	70	70
GK2AA-S12	10	L2	.540	1.4	.008	–	14	28	33	44	52	70	70
GK3AA-P02	.1	$\pi$	.540	1.0	10	12	40	70	70	70	70	70	70
GK3AA-P07	.5	$\pi$	.540	1.0	1	–	18	60	70	70	70	70	70
GK3AA-P09	2	$\pi$	.540	1.0	.063	–	9	36	53	70	70	70	70
GK3AA-P12	10	$\pi$	1.020	1.0	.008	–	9	24	29	40	70	70	70
GK4AA-T08	1	T	1.020	.75	.5	–	10	25	49	70	70	70	70
GK4AA-T09	2	T	1.020	.75	.09	–	10	20	32	56	70	70	70
GK4AA-T16	4	T	1.020	.75	.03	–	10	19	29	42	70	70	70
GK4AA-T12	10	T	1.020	.75	.008	–	9	19	28	39	58	65	65
GK2AA-S04	.25	L2	.540	.45	1.5	–	–	38	50	60	60	60	60
GK3AA-P04	.25	$\pi$	.540	.90	1.5	–	–	64	80	80	80	80	80
GK2AA-S08	1.0	L2	.540	.45	.25	–	–	23	34	55	60	60	60
GK3AA-P08	1.0	$\pi$	.540	.90	.25	–	–	52	70	80	80	80	80
GK2AA-S10	3.0	L2	.540	.45	.05	–	–	18	27	45	60	60	60
GK3AA-P10	3.0	$\pi$	.540	.90	.05	–	–	25	51	80	80	80	80
GK2AA-S11	5.0	L2	.540	.45	.015	–	–	17	24	36	60	60	60
GK3AA-P11	5.0	$\pi$	.540	.90	.015	–	–	–	38	75	80	80	80

<sup>1</sup> Decimal point values indicate capacitance in microfarads.  
Non-decimal point values indicate capacitance in picofarads.

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

**NOTE:** All “L2” circuits are also available as “L1”.  
Insertion loss and other parameters are identical.  
Only the part number changes  
(e.g., L2 = GK2LA-S04, L1 = GK2LA-R04).

# Cylindrical Style EMI Filters

## GK Series – .375/.410 Dia. – Hermetically Sealed –

### Circuits Available – L, $\pi$ , T



## SPECIFICATIONS

AVX P/N	Current AMP	CKT	L. dim	CAP <sup>1</sup>	DCR	Insertion Loss <sup>2</sup> Per MIL-STD-220, +25°C							
						100 KHz	150 KHz	300 KHz	1 MHz	10 MHz	100 MHz	1 GHz	
<b>150 VDC, .25–.50 <math>\mu</math>F</b>													
GK2HA-S02	.1	L2	.540	.25	1.7	32	39	51	60	60	60	70	
GK2HA-S05	.3	L2	.540	.25	.77	25	30	44	60	60	60	70	
GK2HA-S07	.5	L2	.540	.25	.36	20	26	39	59	60	60	70	
GK2HA-S08	1.0	L2	.540	.25	.14	12	16	26	48	60	60	70	
GK2HA-S10	3.0	L2	.540	.25	.05	11	15	20	36	60	60	70	
GK2HA-S11	5.0	L2	.540	.25	.015	8	12	20	32	60	60	70	
GK2HA-S12	10.0	L2	.540	.25	.008	6	12	20	32	40	56	70	
GK3HA-P02	0.1	$\pi$	.540	.50	1.7	49	60	70	80	80	80	80	
GK3HA-P05	0.3	$\pi$	.540	.50	.77	43	53	70	80	80	80	80	
GK3HA-P07	0.5	$\pi$	.540	.50	.36	37	48	66	80	80	80	80	
GK3HA-P08	1.0	$\pi$	.540	.50	.14	28	40	58	80	80	80	80	
GK3HA-P10	3.0	$\pi$	.540	.50	.05	–	–	38	70	80	80	80	
GK3HA-P11	5.0	$\pi$	.540	.50	.015	–	–	20	63	80	80	80	
GK3HA-P12	10.0	$\pi$	.540	.50	.008	–	–	15	35	60	80	80	
GK4HA-T08	1	T	1.020	.25	.5	15	23	42	70	80	80	80	
GK4HA-T09	2	T	1.020	.25	.09	9	13	32	50	70	80	80	
GK4HA-T16	4	T	1.020	.25	.03	6	10	21	40	60	80	80	
GK4HA-T12	10	T	1.020	.25	.006	–	9	21	28	44	60	80	
<b>200 VDC, .15–.36 <math>\mu</math>F</b>													
AVX P/N	Current AMP	CKT	L. dim	CAP <sup>1</sup>	DCR	10 KHz	30 KHz	150 KHz	300 KHz	1 MHz	10 MHz	100 MHz	1 GHz
GK2BA-S02	.1	L2	.540	.15	10	–	21	50	61	70	70	70	70
GK2BA-S04	.25	L2	.540	.15	.4	–	11	39	51	70	70	70	70
GK2BA-S07	.5	L2	.540	.15	1	–	3	29	41	63	70	70	70
GK2BA-S08	1	L2	.540	.15	.25	–	–	18	28	49	70	70	70
GK2BA-S09	2	L2	.540	.15	.063	–	–	15	21	38	70	70	70
GK2BA-S10	3	L2	.540	.15	.027	–	–	15	21	31	70	70	70
GK2BA-S12	10	L2	.540	.15	.008	–	–	15	21	31	51	60	60
GK3BA-P02	.1	$\pi$	.540	.36	10	–	21	61	70	70	70	70	70
GK3BA-P04	.25	$\pi$	.540	.36	4	–	10	52	68	70	70	70	70
GK3BA-P07	.5	$\pi$	.540	.36	1	–	–	44	63	70	70	70	70
GK3BA-P08	1	$\pi$	.540	.36	.25	–	–	30	46	70	70	70	70
GK3BA-P09	2	$\pi$	.540	.36	.063	–	–	16	33	63	70	70	70
GK3BA-P10	3	$\pi$	.540	.36	.027	–	–	–	21	55	70	70	70
GK3BA-P12	10	$\pi$	.540	.36	.008	–	–	–	20	30	60	70	70
GK4BA-T08	1	T	1.020	.15	.5	–	3	17	42	70	70	70	70
GK4BA-T09	2	T	1.020	.15	.09	–	–	12	24	48	70	70	70
GK4BA-T16	4	T	1.020	.15	.03	–	–	12	21	34	70	70	70
GK4BA-T12	10	T	1.020	.15	.008	–	3	12	21	31	50	60	60

<sup>1</sup> Decimal point values indicate capacitance in microfarads. Non-decimal point values indicate capacitance in picofarads.

<sup>2</sup> Insertion loss limits are based on theoretical values.

Actual measurements may vary due to internal capacitor resonances and other design constraints.

**NOTE:** All “L2” circuits are also available as “L1”. Insertion loss and other parameters are identical.

Only the part number changes (e.g., L2 = GK2LA-S04, L1 = GK2LA-R04).

# Cylindrical Style EMI Filters

## GK Series – .375/.410 Dia. – Hermetically Sealed –

### Circuits Available – L, $\pi$ , T



## SPECIFICATIONS

AVX P/N	Current AMP	CKT	L. dim	CAP <sup>1</sup>	DCR	Insertion Loss <sup>2</sup> Per MIL-STD-220, +25°C							
						10 KHz	30 KHz	150 KHz	300 KHz	1 MHz	10 MHz	100 MHz	1 GHz
<b>200 VDC (125 VAC/400 Hz) .15–.30 <math>\mu</math>F</b>													
GK2LA-S02	.1	L2	.540	.15	10	–	14	42	54	70	70	70	70
GK2LA-S07	.5	L2	.540	.15	1	–	–	23	35	56	70	70	70
GK2LA-S09	2	L2	.540	.15	.063	–	–	8	14	30	70	70	70
GK2LA-S12	10	L2	.540	.15	.008	–	–	8	14	25	45	60	60
GK3LA-P02	.1	$\pi$	.540	.3	10	–	21	60	70	70	70	70	70
GK3LA-P07	.5	$\pi$	.540	.3	1	–	–	40	56	70	70	70	70
GK3LA-P10	3	$\pi$	.540	.3	.027	–	–	–	25	54	70	70	70
GK3LA-P12	10	$\pi$	.540	.3	.008	–	–	–	20	30	70	70	70
GK2LA-S04	.25	L2	.540	.15	1.5	–	6	28	40	60	60	60	70
GK2LA-S08	1	L2	.540	.15	.25	–	–	13	24	45	60	60	70
GK2LA-S10	3	L1	.540	.15	.05	–	–	8	16	30	60	60	70
GK2LA-S11	5	L2	.540	.15	.015	–	–	8	14	26	55	55	70
GK3LA-P04	.25	$\pi$	.540	.3	1.5	–	8	44	62	80	80	80	80
GK3LA-P08	1	$\pi$	.540	.3	.25	–	–	32	50	80	80	80	80
GK3LA-P10	3	$\pi$	.540	.3	.05	–	–	–	19	59	80	80	80
GK3LA-P11	5	$\pi$	.540	.3	.015	–	–	–	–	51	80	80	80
GK4LA-T08	1	T	1.020	.15	.5	–	–	10	36	66	70	70	70
GK4LA-T09	2	T	1.020	.15	.09	–	–	7	18	41	70	70	70
GK4LA-T16	4	T	1.020	.15	.03	–	–	8	15	27	70	70	70
GK4LA-T12	10	T	1.020	.15	.008	–	–	8	15	25	70	70	70

<sup>1</sup> Decimal point values indicate capacitance in microfarads.  
Non-decimal point values indicate capacitance in picofarads.

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

**NOTE:** All “L2” circuits are also available as “L1”.  
Insertion loss and other parameters are identical.  
Only the part number changes  
(e.g., L2 = GK2LA-S04, L1 = GK2LA-R04).