



P600L High-Reliability Solid Body Fuses

AEM, Inc. is the sole U.S. manufacturer of solid body current limiting fuses produced utilizing hermetically sealed gold fusing elements with subsequent screening and qualification for spacecraft/ satellite applications. AEM, Inc.'s P600L Series Fuses have been selected by most major space programs and have been in orbit for the past 37 years with **zero failures**.

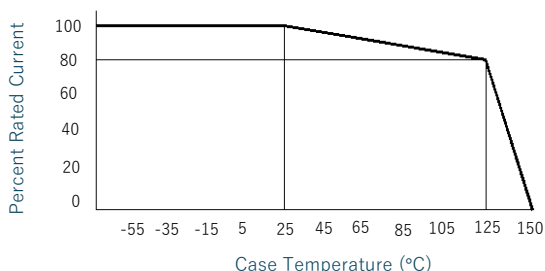
Features

- Solid body construction with hermetically sealed gold fusing elements
- Consistent clearing times achieved at overload currents regardless of vacuum conditions
- Solid body construction without outgassing and not subjected to the de-rating factors of MIL-STD-975
- Solid body construction capable of withstanding greater vibration and shock exposure without damage
- Positive temperature coefficient of fuse element causing resistance to increase (prior to opening) thereby preventing absolute short to the power source
- Internal construction ensuring that arc, plasma, and vapor are contained within the fuse package during overload current conditions
- Groups A/B data supplied with each shipment and Group C inspection optional
- High-reliability fuse series with over 29 million hours of life testing without a failure
- Available as QPL Certified per MIL-PRF-23419/12

Applications

- Satellite / Spacecraft
- Aerospace
- Avionics
- Military

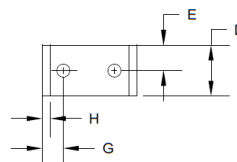
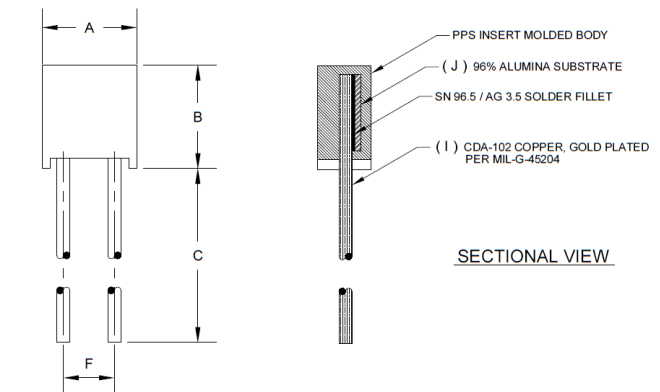
Derating Curve



Product Dimensions

(Inches)

Dimension	Figure 1*	Figure 2*	Figure 3*	Figure 4*
A	.280 max.	.380 max.	.380 max.	.625 max.
B	.270 max.	.410 max.	.410 max.	.440 max.
C	1.50 min.	2.00 min.	2.00 min.	2.00 min.
D	.145 max.	.210 max.	.210 max.	.325 max.
E	.070 typ.	.100 typ.	.100 typ.	.152 typ.
F	.160 ± .010	.200 ± .010	.200 ± .010	.350 ± .010
G	.055 typ.	.085 typ.	.087 typ.	.125 typ.
H	.025 typ.	.032 typ.	.032 typ.	.032 typ.
I	.026 ± .001 Dia.	.051 ± .001 Dia.	.064 ± .001 Dia.	.051 ± .001 Dia.
J	.020 typ.	.025 typ.	.025 typ.	.040 typ.



* See table on Page 2.

AEM, INC.'s P600L High-Reliability Solid Body Fuses

Electrical Characteristics

Fuse Part Number / Ratings			DC Resistance (Ohms) / 1		Fig.	Overload Interrupt Time (Seconds) / 2 / 3			Maximum I ² t (A ² Sec)		
Part Number	Maximum Voltage (VDC)	Current Rating (Amps)	Minimum	Maximum		250% Nominal Rating	400% Nominal Rating	600% Nominal Rating	250% Nominal Rating	400% Nominal Rating	600% Nominal Rating
P600L-72-1/8	72 / 80	1/8	6.375	10.625	1	0.005-30.0	0.0005-0.015	0.000075-0.003	2.93	0.00375	0.00169
P600L-72-1/4	72 / 80	1/4	1.875	3.125	1	0.005-30.0	0.0005-0.015	0.000075-0.003	11.7	0.0150	0.00675
P600L-72-3/8	72 / 80	3/8	1.125	1.875	1	0.01-0.300	0.001-0.015	0.00015-0.003	0.264	0.0338	0.0152
P600L-72-1/2	72 / 80	1/2	0.675	1.125	1	0.01-0.300	0.001-0.015	0.00015-0.003	0.469	0.0600	0.0270
P600L-72-3/4	72 / 80	3/4	0.225	0.375	1	0.01-0.300	0.001-0.015	0.00015-0.003	1.06	0.135	0.0608
P600L-72-1.0	72 / 80	1.0	0.135	0.225	1	0.01-0.300	0.001-0.015	0.00015-0.003	1.88	0.240	0.108
P600L-72-1.5	72 / 80	1.5	0.097	0.163	1	0.01-0.300	0.001-0.015	0.00015-0.003	4.22	0.540	0.243
P600L-72-2.0	72 / 80	2.0	0.045	0.075	1	0.01-0.300	0.001-0.015	0.00015-0.003	7.50	0.960	0.432
P600L-72-3.0	72 / 80	3.0	0.0262	0.0438	1	0.01-0.300	0.001-0.015	0.00015-0.003	16.9	2.16	0.972
P600L-72-4.0	72 / 80	4.0	0.0195	0.0325	1	0.01-0.300	0.001-0.015	0.00015-0.003	30.0	3.84	1.73
P600L-72-5.0	72 / 80	5.0	0.0135	0.0225	1	0.01-0.300	0.001-0.015	0.00015-0.003	46.9	6.00	2.70
P600L-72-6.0	72 / 80	6.0	0.0112	0.0188	1	0.01-0.300	0.001-0.015	0.00015-0.003	67.5	8.64	3.89
P600L-72-7.5	72 / 80	7.5	0.0082	0.0138	1	0.01-0.300	0.001-0.015	0.00015-0.003	105	13.5	6.08
P600L-72-10.0	72 / 80	10.0	0.0063	0.0107	2	0.01-0.300	0.001-0.015	0.00015-0.003	188	24.0	10.8
P600L-72-15.0	72 / 80	15.0	0.0040	0.0070	2	0.01-0.300	0.001-0.015	0.00015-0.003	422	54.0	24.3
P600L-125-1/8	125 / 135	1/8	6.375	10.625	1	0.005-30.0	0.0005-0.015	0.000075-0.003	2.93	0.00375	0.00169
P600L-125-1/4	125 / 135	1/4	1.875	3.125	1	0.005-30.0	0.0005-0.015	0.000075-0.003	11.7	0.0150	0.00675
P600L-125-3/8	125 / 135	3/8	1.125	1.875	1	0.01-0.300	0.001-0.015	0.00015-0.003	0.264	0.0338	0.0152
P600L-125-1/2	125 / 135	1/2	0.675	1.125	2	0.01-0.300	0.001-0.015	0.00015-0.003	0.469	0.0600	0.0270
P600L-125-3/4	125 / 135	3/4	0.225	0.375	2	0.01-0.300	0.001-0.015	0.00015-0.003	1.06	0.135	0.0608
P600L-125-1.0	125 / 135	1.0	0.090	0.270	2	0.01-0.300	0.00075-0.015	0.00010-0.003	1.88	0.240	0.108
P600L-125-1.5	125 / 135	1.5	0.085	0.225	2	0.01-0.300	0.00075-0.015	0.00010-0.003	4.22	0.540	0.243
P600L-125-2.0	125 / 135	2.0	0.045	0.135	2	0.01-0.300	0.00075-0.015	0.00010-0.003	7.50	0.960	0.432
P600L-125-3.0	125 / 135	3.0	0.035	0.105	2	0.01-0.300	0.00075-0.015	0.00010-0.003	16.9	2.16	0.972
P600L-125-4.0	125 / 135	4.0	0.030	0.090	2	0.01-0.300	0.00075-0.015	0.00010-0.003	30.0	3.84	1.73
P600L-125-5.0	125 / 135	5.0	0.022	0.068	2	0.01-0.300	0.00075-0.015	0.00010-0.003	46.9	6.00	2.70
P600L-125-7.5	125 / 135	7.5	0.0165	0.0275	4	0.100-4.00	0.008-0.048	0.0008-0.008	1410	43.2	16.2
P600L-125-10.0	125 / 135	10.0	0.0120	0.0200	4	0.100-4.00	0.008-0.048	0.0008-0.008	2500	76.8	28.8
P600L-125-15.0	125 / 135	15.0	0.0090	0.0130	4	0.100-5.00	0.010-0.060	0.001-0.010	7030	216	81.0
P600L-50-20.0	50	20.0	0.0025	0.0050	3	0.01-0.300	0.001-0.015	0.00015-0.003	750	96.0	43.2

Notes:

1/ DC Resistance is measured at current levels less than or equal to 10% of rated current.

2/ Overload interrupt times at -55 °C and 250% overload current shall be as follows:

a) Fuses with ratings less than 3/8 amperes shall open in 60 seconds maximum.

b) Fuses with ratings from 3/8 to 1.0 ampere shall open in 10 seconds maximum.

c) Fuses with ratings greater than 1.0 ampere shall open in 5 seconds maximum.

3/ Maximum I²t at -55 °C and 250% overload current may be greater than indicated. To calculate maximum I²t at a case temperature of -55 °C and 250% overload current, multiply the I² product by the maximum blow times indicated in Note 2 above.

4/ P600L-125 options are also available as 135 VDC fuses.

5/ P600L-72 options are also available as 80 VDC fuses

AEM, Inc.'s SK406 series is a modified lead configuration of the P600L, providing the design engineer additional flexibility of surface mounting the popular P600L series.

