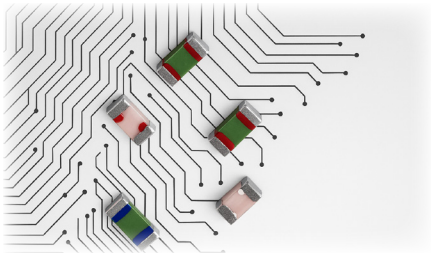
SM1206 High-Reliability Solid Body Fuses



Features

- Solid body construction with a thick film gold fusing element.
- Tightly controlled blowing times over a wide range of operating conditions (including vacuum operation).
- Low DC resistance (low power dissipation).
- Termination finish is Sn/Pb solder .
- Operating temperature range: -55 °C to +125 °C.

Applications

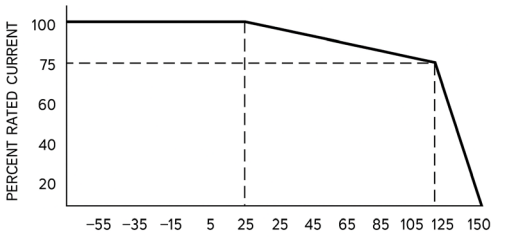
- Satellite/Spacecraft
- Aerospace
- Avionics
- Military

Electrical Characteristics

Fuse Part Numbers / Ratings			DC Resistance (Ohms) / 1		Overload Interrupt Time (Seconds) /2 /3 /4			Maximum I^2T (Ampere^{2}Sec) /3		
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
SM1206-32-1/4	32	0.250	1.500	2.500	.005-60.0	.0005-.015	.00005-.003	23.437	0.015	0.00675
SM1206-32-3/8	32	0.375	1.125	1.875	.005-60.0	.0005-.015	.00005-.003	52.734	0.03375	0.0151
SM1206-32-1/2	32	0.500	0.450	0.750	.005-10.0	.0005-.015	.00005-.003	15.625	0.06	0.027
SM1206-32-3/4	32	0.750	0.198	0.331	.005-10.0	.0005-.015	.00005-.003	35.156	0.135	0.06075
SM1206-32-1.0	32	1.000	0.120	0.190	.005-5.0	.0005-.010	.0001-.003	31.25	0.16	0.108
SM1206-32-1.5	32	1.500	0.0825	0.1375	.005-3.0	.0005-.010	.0001-.003	42.187	0.36	0.243
SM1206-32-2.0	32	2.000	0.0410	0.0680	.005-3.0	.0005-.010	.0001-.003	75	0.64	0.432
SM1206-32-3.0	32	3.000	0.0240	0.0400	.005-1.0	.0005-.010	.0001-.003	56.25	1.44	0.972
SM1206-24-4.0	24	4.000	0.0184	0.0276	.005-1.0	.0005-.010	.0001-.003	100	2.56	1.728
SM1206-24-5.0	24	5.000	0.0120	0.0200	.005-1.0	.0005-.010	.0001-.003	156.25	4	2.7
SM1206-24-6.0	24	6.000	0.0105	0.0175	.010-1.0	.0005-.010	.0001-.003	225	5.76	3.888
SM1206-24-7.0	24	7.000	0.0096	0.0144	.010-1.0	.0005-.010	.0001-.003	306.25	7.84	5.292

Notes:
1/ DC resistance is measured using a constant current DC source having an open circuit voltage not greater than the fuse rated voltage and a measurement current from 0.1 to 10 mA, or calculated from voltage drop obtained with 10% rated current applied and an open circuit voltage not greater than the fuse rated voltage.
2/ Overload interrupt clearing times are at +25 °C. Clearing times at 250% overloads and -55 °C may be longer than those noted.
3/ 200% and 1000% overload interrupt times are also supplied with Group A data.
4/ The short circuit interrupt rating: 50 amperes for 1/4-to-3.0-amp ratings at rated voltage, 35 amperes for 4.0-to-5.0-amp ratings at rated voltage.

Derating Curve



Marking Identification

AEM Part Number	Glass Color	Marking Designation Bars/Dots	Marking Ink Color
SM1206-32-1/4	Green	2 Bars	White
SM1206-32-3/8	Green	2 Bars	Red
SM1206-32-1/2	Green	2 Bars	Blue
SM1206-32-3/4	Green	2 Bars	Black
SM1206-32-1.0	Pink	2 Dots	White
SM1206-32-1.5	Pink	2 Dots	Blue
SM1206-32-2.0	Pink	2 Dots	Green
SM1206-32-3.0	Pink	2 Dots	Brown
SM1206-24-4.0	Pink	2 Dots	Yellow
SM1206-24-5.0	Pink	None	None
SM1206-24-6.0	Pink	2 Dots	Red
SM1206-24-7.0	Pink	2 Dots	Orange

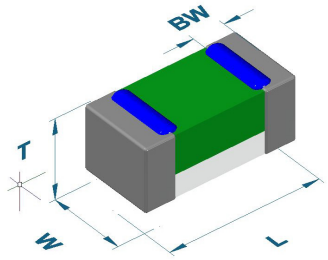
Certified to AS9100D ISO 9001:2015

MIL-STD-790

SM1206 High-Reliability Solid Body Fuses

Product Dimensions

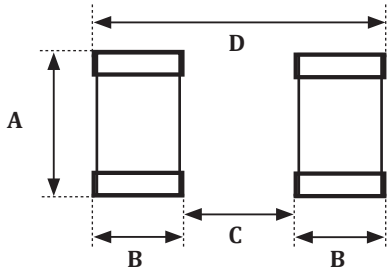
Inches (mm)



L	W	T	BW
0.126 ± 0.008 (3.20 ± 0.20)	0.060 ± 0.008 (1.52 ± 0.20)	0.062 Max. (1.57 Max.)	0.025 ± 0.010 Typ. (0.64 ± 0.25 Typ.)

Recommended Pad Layout

Inches (mm)



A	B	C	D
0.068	0.065	0.045	0.175
1.73	1.65	1.14	4.45

Screening

Group A/B data are supplied with each shipment. Group C is optional

Group A

Examination/Test	Number of units specified
Thermal shock	100 Percent
DC resistance	100 Percent
Overload current characterization	As required (20 pcs. Minimum)
Radiograph inspection (X-Ray)	100 percent
Visual and mechanical inspection	100 percent

Group B

Examination/Test	Number of Units specified	Number of defective allowed
Subgroup I (20 units)		
Overload interrupt (+25°C)	20	0
Resistance after firing	20	0
Subgroup II (8 units)		
Solderbility	8	0
Subgroup III (4 unit)		
Resistance to soldering heat	4	0
Subgroup IV (4 units)		
Termination strength	4	0
Subgroup V (8 units)		
Current carrying capacity (+25°C)	8	0
Subgroup VI (22 units)		
Thermal shock	22	0
168-Hour burn-in	22	0

Certified to AS9100D ISO 9001:2015

MIL-STD-790