

SMT Chip Fuse

Subminiature Surface Mount Fuses

1608FF



Catalog Symbol: 1608FF
Voltage Rating: 24 VDC
Interrupting Rating: 35 Amperes
Physical Size:
 EIA SOCM-1608-AC (Equivalent to 0603)
 1.6 × 0.8 × 0.8mm
 0.063 × 0.032 × 0.032 in.

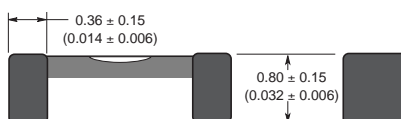
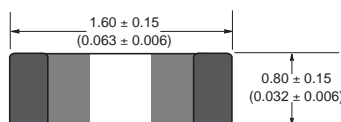
Time-Current Characteristics:
 Carry 100% rated current, 4 hours minimum. Open within 5 seconds at 250% rated current.

Agency Approvals:
 UL Recognized, Std. 248-14, File E19180, Guide JDYX2
 CSA Component Acceptance File 53787, Class 1422-30

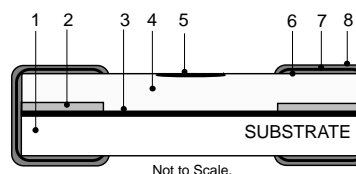
- General Information:**
- Bussmann SMT Chip Fuses utilize thick and thin metal film technologies for superior fusing action and enhanced reliability.
 - The fuse element is bonded to a ceramic substrate and encapsulated with glass, providing excellent short-circuit performance and environmental integrity. Predicted reliability of the 1608FF chip fuse is 30 times greater than that of the typical chip capacitor (consult Bussmann for details).
 - Substrate and coating thermal expansion coefficients are closely matched to that of FR-4 epoxy-glass circuit board for superior solder joint reliability.
 - The end terminations are over-plated with nickel and tin-lead.

Dimensional Data

Dimensions - mm (inches)



Construction



- Ceramic Substrate
- Silver Termination Pad
- Metal Film Fusible Element
- Fused Glass Cover (Color Coded)
- White Stripe (Only On Certain Ratings)
- Silver End Termination
- Nickel Barrier (5.1-10.2 μm)
- 90/10 Tin-Lead Plating (7.6-12.7 μm)

Packaging and Ordering Information:

Tape and Reel: Standard 8mm tape, in compliance with EIA-RS481 (equivalent to IEC 286, Part 3).

	1608FF	(See Table)
	Product Symbol	Rated Current

Package Code
TR = 3,000 pieces on tape on a 178mm reel.
TR1 = 15,000 pieces on tape on a 330mm reel.
SP = 50 pieces on tape in a plastic box.
 Contact Bussmann if other package quantities are required.

CE CE logo denotes compliance with European Union Low Voltage Directive (50-1000 VAC, 75-1500 VDC). Refer to BIF document #8002 or contact Bussmann Application Engineering at 314-527-1270 for more information.

Electrical Characteristics

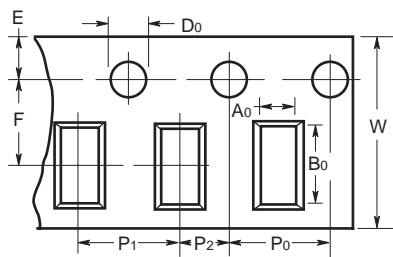
Part Number (XX=Package Code)	Current Rating (Amperes)	Color Code (Cover/Stripe)	Typ. Resistance @ ≤ 10% Rated Current (Ohms)	Typ. Voltage Drop @ Rated Current (Volts)	Typ. Melting Integral @ 35A (A² sec.)	Typ. Total Clearing Integral @ 35A (A² sec.)
xx/1608FF-250mA	0.25	Green	3.0	0.90	.000067	.000082
xx/1608FF-375mA	0.375	Green/White	2.0	0.80	.00015	.00017
xx/1608FF-500mA	0.5	Blue	0.9	0.54	.00055	.00058
xx/1608FF-750mA	0.75	Blue/White	0.51	0.45	.00132	.00137
xx/1608FF-1A	1	Brown	0.15	0.18	.0022	.0026
xx/1608FF-1.5A	1.5	Brown/White	0.068	0.12	.014	.015
xx/1608FF-2A	2	Black	0.042	0.11	.037	.038
xx/1608FF-2.5A	2.5	Black/White	0.029	0.09	.070	.078
xx/1608FF-3A	3	Violet	0.022	0.087	.095	.107
xx/1608FF-3.5A	3.5	Violet/White	0.018	0.08	.185	.190
xx/1608FF-4A	4	Yellow	0.014	0.08	.270	.272

- General Notes:**
- AC interrupting rating, melting integral and total clearing integral measured at 32V, unity power factor.
 - DC interrupting rating, melting integral and total clearing integral measured at 63V (250mA-3A) and 32V (4-5A), with a battery source.
 - It is recommended that fuses be mounted with ceramic (white) side facing up.
 - Contact Bussmann if higher ampere ratings are needed.
 - Device designed to carry rated current for four hours minimum. An operating current of 80% or less of rated current is recommended, with further derating required at elevated ambient temperatures.

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Carrier Dimensions - mm

W	8.0 + 0.3 / -0.1
F	3.5 ± 0.05
E	1.75 ± 0.1
P ₂	2.0 ± 0.05
P ₀	4.0 ± 0.1
P ₁	4.0 ± 0.1
A ₀	1.71 ± 0.1
B ₀	1.88 ± 0.1
D ₀	1.5 + 0.1 / -0.0

Environmental Specifications

Operating Temperature Range:

-65 to +125°C, with proper derating.

Thermal Shock:

MIL-STD-202, Method 107, Test Condition B (-65 to 125°C), 1000 cycles, fuses soldered to FR-4 glass -epoxy circuit board.

Vibration:

MIL-STD-202, Method 204, Test Condition C (55 to 2000 Hz, 10G).

Solderability:

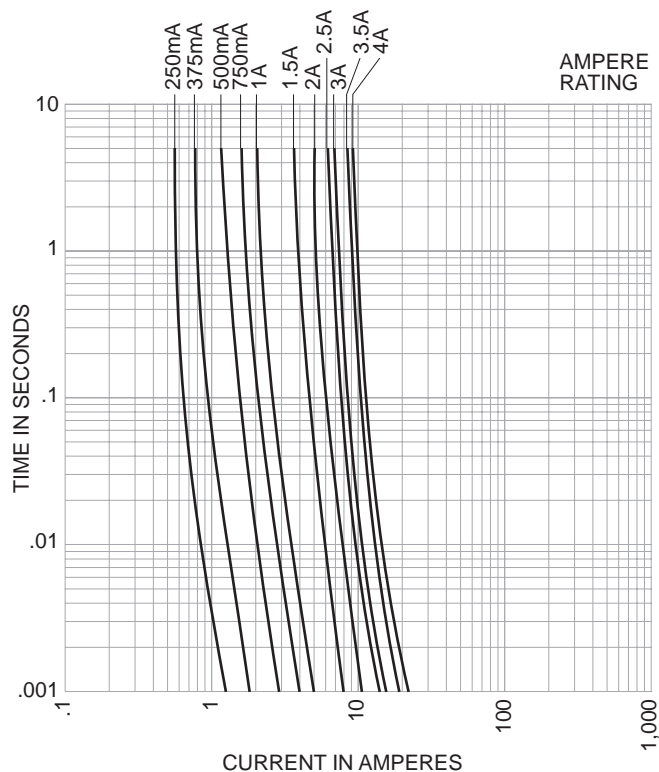
Withstands 60 seconds above 200°C, 260°C maximum.

Moisture Resistance:

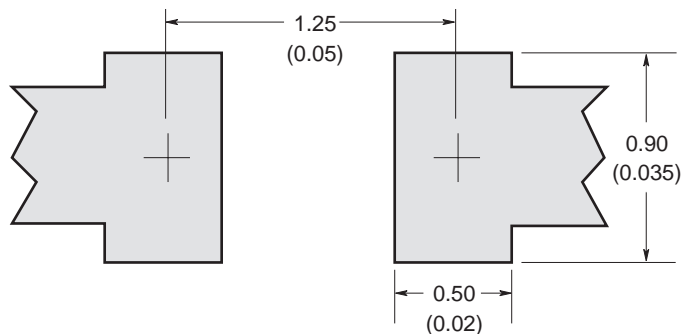
MIL-STD-202, Method 106, 10 day cycle.

Solder Leach Resistance & Terminal Adhesion:

EIA-576 (30 seconds submersion in 260°C tin-lead solder).



Recommended Land Pattern - mm (inches)



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