

Raychem FT600 Series Overcurrent Fuse

New surface-mount fuse products for overcurrent protection of communications equipment



Benefits:

- When combined with a SiBar™ overvoltage protection device, assists equipment in meeting regulatory standards with no additional series components
- Improved temperature rise performance over other similar SMT fuse devices under sneak current testing
- High density placement in multi-port system designs

Features:

- The lightning robust surface-mount fuse offers overcurrent protection from power faults
- Designed to assist equipment in complying with telecom specifications including UL60950, FCC Part 68, and Telcordia GR-1089
- Small footprint and low resistance
- Low profile

Target Applications:

- xDSL and ADSL linecards and modems
- T1/E1 systems
- Twisted pair telecom ports requiring Telcordia GR-1089, UL60950 and FCC Part 68 compliance

Interrupt Voltage and Current Ratings

Part Number	Ampere Rating (A)	Voltage Rating (V)	Typical Resistance (Ω)	Typical I ² t (A ² s)*
FT600-0500	0.50	250	0.5	1
FT600-1250	1.25	250	0.1	16
FT600-2000	2.00	250	0.05	18

The FTxxxx devices are designed to carry 100% of rated current for 4 hours minimum and 250% of rated current for 1 second minimum, 120 seconds maximum. Resistance measured at 10% of rated current. *It is calculated at 10 ms or less.

Power Cross

	GR-1089 1000Vac, 5A, 0.5sec	GR-1089 600Vac, 60A, 5sec	UL60950 600Vac, 40A, 1.5sec	GR-1089/UL60950 600Vac, 7A, 5sec	GR-1089/UL60950 600Vac, 2.2A, 30min	GR-1089 277Vac, 25A, 15min	UL60950 120Vac, 25A, 30min
FT600-0500			✓	✓	✓	✓	✓
FT600-1250	✓	✓	✓	✓	✓	✓	✓
FT600-2000	✓	✓	✓	✓	✓	✓	✓

Note: FT600-1250 and FT600-2000 are designed to assist equipment in complying with Telcordia GR-1089 specifications. In-circuit testing is strongly recommended.

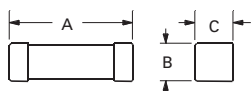
Lightning Surge

Telcordia GR-1089	First Level Test 1	First Level Test 2	First Level Test 3	First Level Test 4	First Level Test 5	Second Level Test 1
Surge Voltage (Vpk)	600	1000	1000	2500	1000	5000
Wave Form (μ s)	10x1000	10x360	10x1000	2x10	10x360	2x10
Surge Current (A)	100	100	100	500	25	500
Repetitions (each polarity)	25	25	25	10	5	1
FT600-0500						
FT600-1250	✓	✓	✓	✓	✓	✓
FT600-2000	✓	✓	✓	✓	✓	✓

FCC Part 68	Type A Metallic	Type A Longitudinal	Type B Metallic	Type B Longitudinal
Surge Voltage (Vpk)	800	1500	1000	1500
Short Circuit Wave Form (μ s)	10x560	10x160	5x320	5x320
Surge Current (A)	100	200	25	37.5
Repetitions (each polarity)	1	1	1	1
FT600-0500	Fuse open	Fuse open	✓	✓
FT600-1250	✓	✓	✓	✓
FT600-2000	✓	✓	✓	✓

The FT600-0500, FT600-1250 and FT600-2000 are designed to meet the FCC Part 68 lightning surge requirements. Note that Type A tests allow for an overcurrent protection component to fuse open during the surge.

Product Dimensions



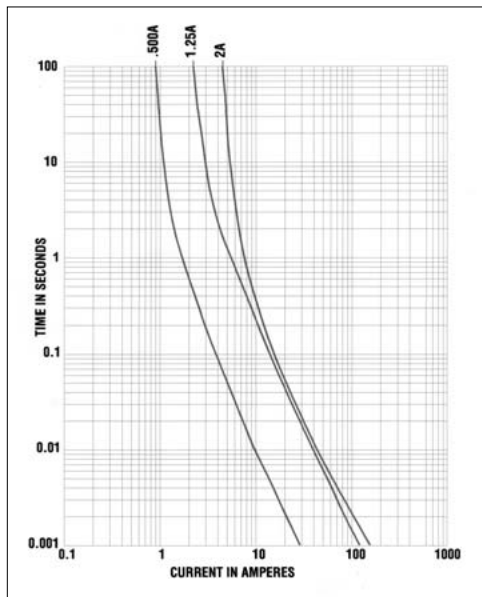
Dimensions in millimeters (inches)

A (Max.)	B (Max.)	C (Max.)
10.5 (0.413)	3.4 (0.133)	3.4 (0.133)

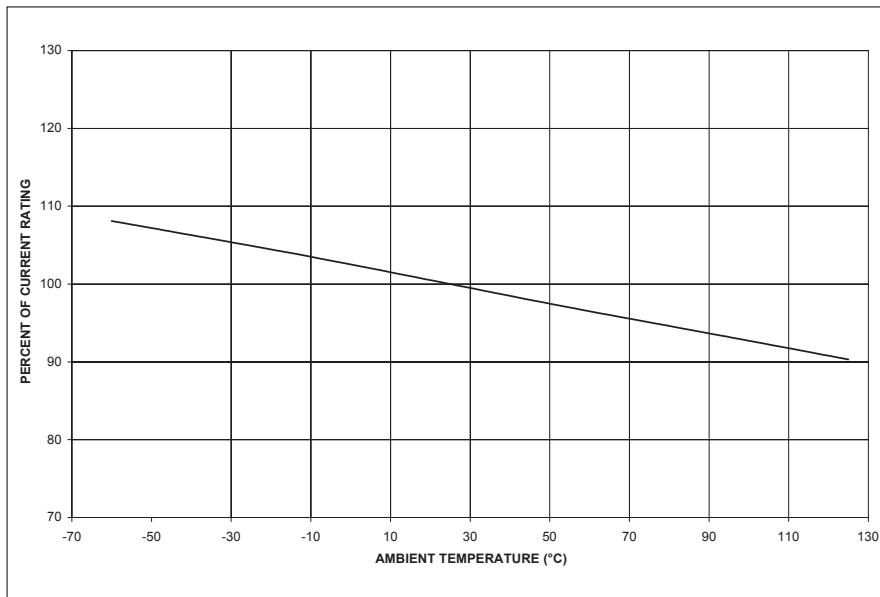
Details

Termination material	Silver-plated brass
Body material	Ceramic
Termination solderability	Per IEC-60127-4
Solder heat withstand	Per MIL-STD-202, Method 210, Test Condition J
Solvent resistance	Per MIL-STD-202F, Method 215J
Storage temperature	-40/+85°C
Storage humidity	Per MIL-STD-202F, Method 106F

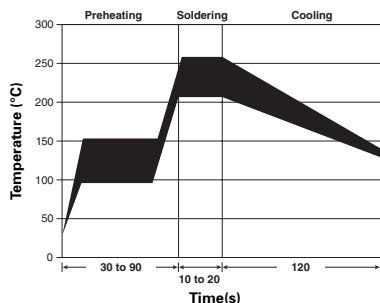
Typical Time-to-Open Characteristics (at 25° C)



Thermal Derating Curve



Solder Reflow Recommendations



Solder Reflow

- Recommended reflow methods: IR, vapor phase oven, hot air oven.
- Devices can be cleaned using standard industry methods and solvents.

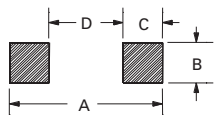
Ordering Information

Part numbers	FT600-0500-2 FT600-1250-2 FT600-2000-2
Devices per reel	2,500/reel
Standard package	10,000/box

Note: The -2 designates tape and reel, the package style for this product.

Recommended Pad Layout

The dimensions in the table below provide the recommended pad layout for each FT600 device.



Dimensions in millimeters (inches)

A	B	C	D
12.6 (0.496)	4.0 (0.157)	3.7 (0.145)	5.2 (0.204)

Agency Recognitions

UL	File # E197536
CSA	Pending

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www.circuitprotection.com.hk (Chinese)
www.raychem.com/go/jpn/polyswitch (Japanese)

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