

**Telecom Circuit Protector**  
1025TC Series



**Description**

The telecom circuit protector designed to protect against power cross faults and comply with all surge requirements. Allows compliance with telecom regulatory standards including Bellcore GR 1089, UL 1950/60950, and FCC part 68. Application circuit testing is recommended. Protects against overcurrent conditions found in telecom Subscriber Line Interface Cards (SLICs), xDSL Modem Applications, Set-Top Boxes, and Consumer Premises Equipment (CPE).

Electrical Characteristics			
Rated Current	1.0In	2.5In	3.0In
500mA~2A	4 hour minimum	1 ~120 sec	10 sec maximum

**Specifications**

Part No.	Rated Voltage	Rated Current (A)	Marking Code	Breaking Capacity (A) <sup>1</sup>		Typical Cold Resistance (mOhms) <sup>3</sup>	Typical Voltage Drop (mV)	Typical Pre-Arcing I <sup>2</sup> t (A <sup>2</sup> Sec) <sup>4</sup>	Maximum Total Clearing I <sup>2</sup> t <sup>5</sup>
	AC			250VAC	600VAC <sup>2</sup>				
1025TC500mA	250V	500mA	FR.	50	60	530	470	1.3	100A <sup>2</sup> Sec
1025TC1.25A	250V	1.25A	JR.	50	60	110	205	22	
1025TC2A	250V	2A	NR.	50	60	75	200	30	

1. AC Interrupting Rating (measured at designated voltage, 100% power factor);
2. 600Vac, 60A Interrupting ratings test were performed by closing the circuit between 50° and 70° on the voltage wave.
3. DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C
4. Typical Pre-arcing I<sup>2</sup>t are measured at 60Vdc, 10In Current
5. Maximum Total Clearing is measured on a 40A, 600V AC, unity power factor circuit.

**Surge Specification**

TIA-968-A (formerly FCC Part 68) Surge Waveforms (Fuse cannot open)

Surge	Voltage	Waveforms	Current	Reps	Fuse Choices
Metallic A	800V	10x560µs	100A	2	0.5/1.25A
Longitudinal A	1500V	10x160µs	200A	2	1.25/2A
Metallic B	800V	9x720µs/5x320µs	25A	2	1.25/2A
Longitudinal B	1500V	9x720µs/5x320µs	37.5A	2	0.5/1.25A

Bellcore GR-1089-CORE Surge Waveforms (Fuse cannot open)

Surge	Voltage	Waveforms	Current	Reps	Fuse Choices
First Level Lightning	1000V	10x1000µs	100A	50	1.25/2A
Second Level Lightning	2500V	2x10µs	500A	50	1.25/2A

ITU K.20 Surge Waveforms (Fuse cannot open)

Surge	Voltage	Waveforms	Current	Reps	Fuse Choices
A Series	1500V	10x700µs/5x310µs	37.5A	10	1.25A

**Electrical and Power Cross Test**

Test	Voltage	Current	Duration	Standard
First Level	AC600V	3A	1.1s	Bellcore GR-1089
Second Level	AC277V	25A	15min	Bellcore GR-1089

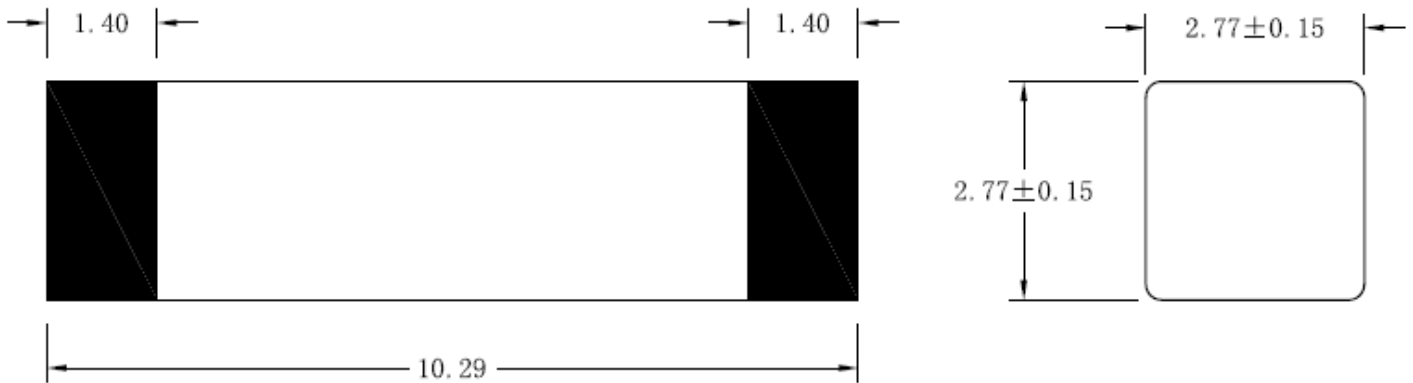
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Second Level	AC600V	60A	5s	Bellcore GR-1089
L1 Test	AC600C	40A	1.5s	UL60950
L3 Test	AC600V	2.2A	30min	UL60950
A criteria	AC600V	1A	0.2s	ITU K.20
A criteria	AC230V	1.44A	15min	ITU K.20
B criteria	AC230V	23A	15min	ITU K.20

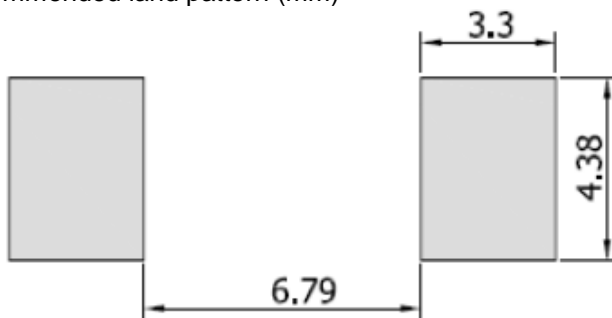
**Dimension**

Drawing not to scale (Unit: mm)



**Recommended solder curve**

- Wave Solder
  - ◆ Reservoir Temperature: 260°C
  - ◆ Time in Reservoir: 3 Seconds Maximum
- Infrared Reflow
  - ◆ Temperature: 260°C
  - ◆ Time: 30 Seconds Maximum
- Recommended land pattern (mm)



**Package and Minimum order QTY**

2500pcs fuses in tape (width 24mm) and reel (dia. 13inch)

### Time-Current Curves

