

DUAL ASYMMETRICAL TRANSIENT SUPPRESSOR

PRODUCT PREVIEW

DESCRIPTION

This Thyristor Surge Suppressor Device is intended for protection of line card access switches. It provides an efficient polarity- and terminal-dependent over voltage protection for battery backed ringing systems.

IMPORTANT: For the most current data, consult MICROSEMI's website: <http://www.microsemi.com>

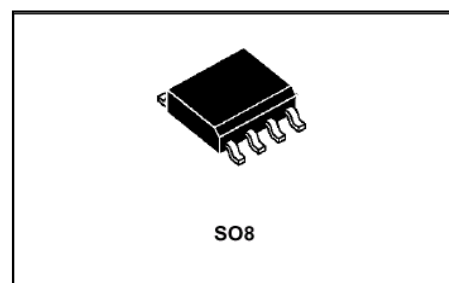
COMPLIES WITH THE FOLLOWING STANDARDS:

GR-1089-CORE	2/10 μ s	175 A
GR-1089-CORE	10/1000 μ s	35 A

KEY FEATURES

- DUAL POLARITY- AND TERMINAL-DEPENDENT ASYMMETRICAL TRANSIENT SUPPRESSOR
- $I_{PP} = 2 \times 35 \text{ A } 10/1000 \mu\text{s}$
- HOLDING CURRENT I_H :
▪ 150 mA MIN
- BREAKOVER VOLTAGE
▪ Ring-Ground -220 V, +130 V
- Tip-Ground -130 V, +130 V

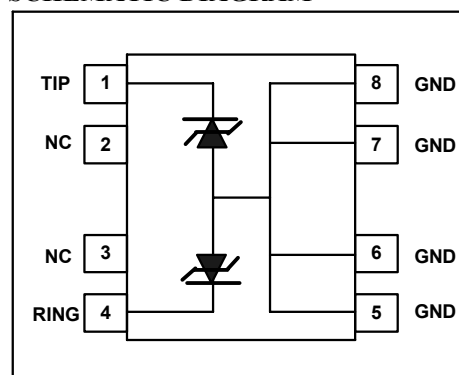
APPLICATIONS/BENEFITS



UL94V-0 TCPxx packages comply with requirements of UL94V-0

(*) with series resistors or PTC.

SCHEMATIC DIAGRAM

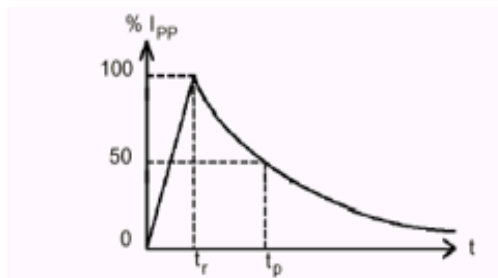


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SUPPRESSOR**
PRODUCT PREVIEW
ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25^{\circ}\text{C}$)

Symbol	Parameter		Value	Unit
I_{PP}	Peak pulse current (see note 1)	10/1000 μs 2/10 μs	35 175	A
I_{TSM}	Non repetitive surge peak on-state current $F = 50\text{ Hz}$	$t = 300\text{ ms}$ $t = 5\text{ s}$	20 2	A
T_{stg}	Storage temperature range		-55 to + 150	$^{\circ}\text{C}$
T_j	Maximum junction temperature		150	$^{\circ}\text{C}$
T_L	Maximum lead temperature for soldering during 10s		260	$^{\circ}\text{C}$

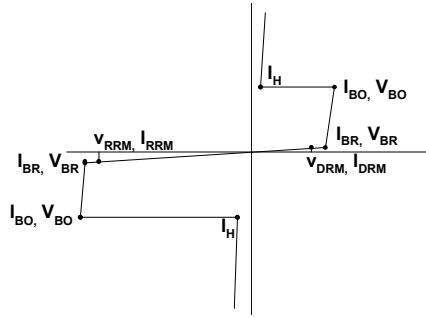
Note 1: Pulse wave

10/1000 μs $t_r = 10\text{ }\mu\text{s}$ $t_p = 1000\text{ }\mu\text{s}$
 2/10 s $t_r = 0.2\text{ s}$ $t_p = 10\text{ }\mu\text{s}$


THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-a)}$	Junction to ambient	170	$^{\circ}\text{C/W}$

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PRODUCT PREVIEW
ELECTRICAL CHARACTERISTICS (Tamb= 25°C)

Symbol	Parameter	
V_{DRM}, V_{RRM}	Stand-off voltage	
I_{DRM}, I_{RRM}	Leakage current at stand-off voltage	
V_{BR}	Breakdown voltage	
V_{BO}	Breakover voltage	
I_H	Holding current	
I_{BO}	Breakover current	
C	Capacitance	

**ELECTRICAL CHARACTERISTICS
T-G AND R-G TERMINALS**

Type	Terminal Pair	V_{DRM}, V_{RRM}	$I_{DRM}@V_{DRM},$ $I_{RRM}@V_{RRM}$	I_H	I_{BO}	V_{BO}	C
		V	μA	mA	mA	V	pF
TCP135L	T-G	-105, +105	-10, +10	-150, +150	-110, +110	-130, +130	30
TCP135L	R-G	-180, +105	-10, +10	-150, +150	-110, +110	-220, +130	30



TCP135L

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www.Microsemi.com

NOTES