

## Advance Information

# Overvoltage Transient Suppressors

... designed for applications requiring a low voltage rectifier with reverse avalanche characteristics for use as reverse power transient suppressors. Developed to suppress transients in the automotive system, these devices operate in the forward mode as standard rectifiers or reverse mode as power avalanche rectifier and will protect electronic equipment from overvoltage conditions.

- Avalanche Voltage 24 to 32 Volts
- High Power Capability
- Economical
- Increased Capacity by Parallel Operation

### Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 2.5 grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- Polarity: cathode polarity band
- MR2535L shipped 1000 units per plastic bag. Available Tape and Reeled, 800 units per reel by adding a "RL" suffix to the part number.
- MR2535S shipped pocket tape and reeled, 500 per 13" reel
- Marking: MR2535L, MR2535S

### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
DC Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	20	Volts
Repetitive Peak Reverse Surge Current (Time Constant = 10 ms, Duty Cycle $\leq$ 1%, $T_C = 25^\circ\text{C}$ ) (See Figure 1)	$I_{RSM}$	110	Amps
Average Rectified Forward Current (Single Phase, Resistive Load, 60 Hz, $T_C = 150^\circ\text{C}$ )	$I_O$	35	Amps
Non-Repetitive Peak Surge Current Surge Supplied at Rated Load Conditions Halfwave, Single Phase	$I_{FSM}$	600	Amps
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-65 to +175	$^\circ\text{C}$

### THERMAL CHARACTERISTICS

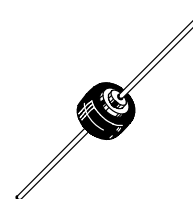
Characteristic	Lead Length	Symbol	Max	Unit
Thermal Resistance, Junction to Lead @ Both Leads to Heat Sink, Equal Length	1/4"	$R_{\theta JL}$	7.5	$^\circ\text{C/W}$
	3/8"		10	
	1/2"		13	
Thermal Resistance Junction to Case		$R_{\theta JC}$	0.8*	$^\circ\text{C/W}$

\*Typical

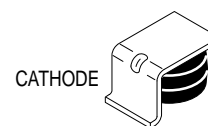
This document contains information on a new product. Specifications and information herein are subject to change without notice.

**MR2535L**  
**MR2535S**

**MEDIUM CURRENT**  
**OVERVOLTAGE**  
**TRANSIENT**  
**SUPPRESSORS**



CASE 194-04



CASE 421A-01

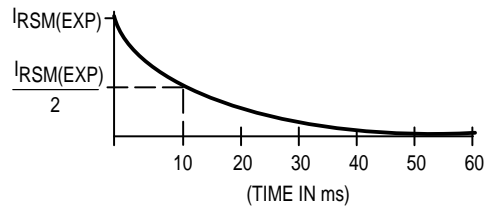
# MR2535L MR2535S

## ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Max	Unit
Instantaneous Forward Voltage (1) ( $I_F = 100$ Amps, $T_C = 25^\circ\text{C}$ )	$V_F$	—	1.1	Volts
Reverse Current ( $V_R = 20$ Vdc, $T_C = 25^\circ\text{C}$ )	$I_R$	—	200	nAdc
Breakdown Voltage (1) ( $I_R = 100$ mAdc, $T_C = 25^\circ\text{C}$ )	$V_{(BR)}$	24	32	Volts
Breakdown Voltage (1) ( $I_R = 90$ Amp, $T_C = 150^\circ\text{C}$ , $PW = 80 \mu\text{s}$ )	$V_{(BR)}$	—	40	Volts
Breakdown Voltage Temperature Coefficient	$V_{(BR)TC}$	—	0.096*	%/ $^\circ\text{C}$
Forward Voltage Temperature Coefficient @ $I_F = 10$ mA	$V_{FTC}$	—	2*	mV/ $^\circ\text{C}$

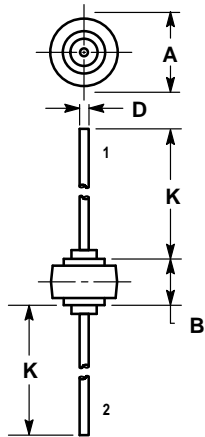
(1) Pulse Test: Pulse Width  $\leq 300 \mu\text{s}$ , Duty Cycle  $\leq 2\%$ .

\*Typical



**Figure 1. Surge Current Characteristics**

PACKAGE DIMENSIONS

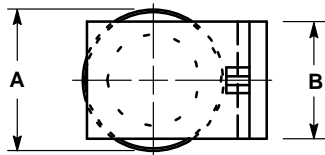


NOTES:  
1. CATHODE SYMBOL ON PACKAGE.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.43	8.69	0.332	0.342
B	5.94	6.25	0.234	0.246
D	1.27	1.35	0.050	0.053
E	25.15	25.65	0.990	1.010

STYLE 1:  
PIN 1. CATHODE  
2. ANODE

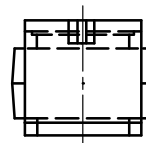
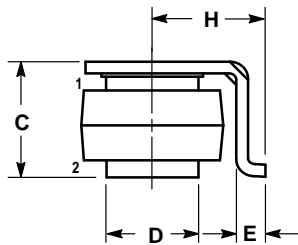
CASE 194-04  
ISSUE F



NOTES:  
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.  
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.330	0.342	8.38	8.69
B	0.270	0.090	6.86	7.37
C	0.275	0.290	6.98	7.37
D	0.218	0.223	5.54	5.66
E	0.060	0.080	1.52	2.03
H	0.255	0.275	6.48	6.98

STYLE 1:  
PIN 1. CATHODE  
2. ANODE



CASE 421A-01  
ISSUE O

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