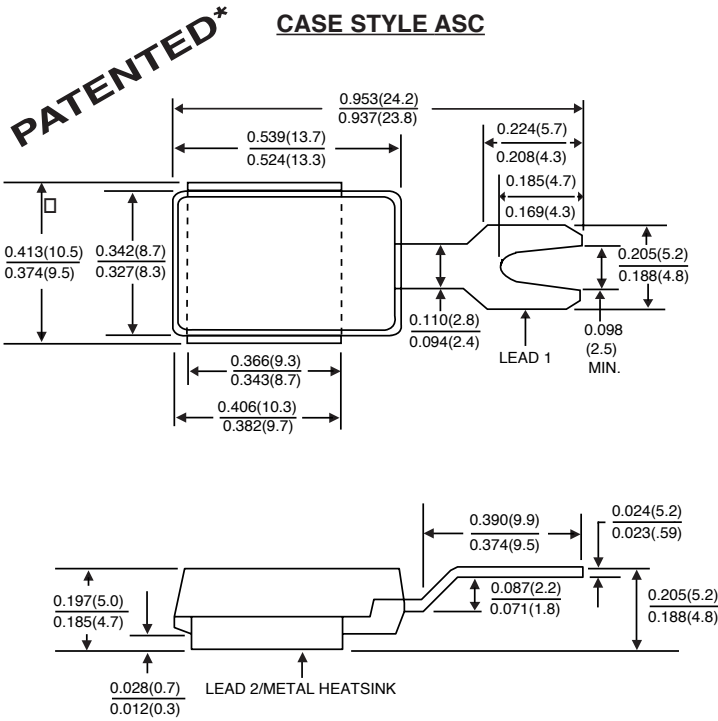


AVALANCHE ALTERNATOR RECTIFIER - AS3024 AND AS3028

PASSIVATED ANISOTROPIC RECTIFIER TECHNOLOGY

Mean Breakdown Voltage - 24 and 28 volts Peak Pulse Current - 60 Amperes



Dimensions in inches and (millimeters)

*Patent #'s 4,980,315
5,166,769
5,278,094

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ High temperature stability due to unique oxide passivation
- ◆ Patented Passivated Anisotropic Rectifier (PAR) construction
- ◆ Integrally molded heatsink provides a very low thermal resistance for maximum heat dissipation
- ◆ Low leakage current at $T_J=175^\circ\text{C}$
- ◆ Low forward voltage drop
- ◆ Ideally suited for alternator rectification and load dump protection
- ◆ High temperature soldering guaranteed: 260°C for 10 seconds at terminals



MECHANICAL DATA

Case: Molded plastic body, surface mount with heatsink integrally mounted in the encapsulation

Terminals: Plated, solderable per MIL-STD-750, Method 2026

Polarity: Unidirectional as marked

Mounting Position: Any

Weight: 0.095 ounces, 2.68 grams

For positive polarity use "P".suffix, for negative polarity use "N" suffix (Polarity refers to lead #1)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	AS3024	AS3028	UNITS
Maximum working peak stand-off voltage	V_{WM}	18.0	20.0	Volts
Minimum reverse breakdown voltage at 100mA	$V_{(BR)}$	20.0	24.0	Volts
Maximum reverse breakdown voltage at 100mA	$V_{(BR)}$	28.0	32.0	Volts
Maximum clamping voltage for $10\mu\text{s}/10\text{ms}$ exponentially decaying waveform at $I_{PP}=55\text{A}$	V_C	38.0	40.0	Volts
Maximum average rectified forward current at $T_C=150^\circ\text{C}$	$I_{(AV)}$	30.0		Amps
Peak forward surge current, 8.3ms single half sine-wave on rated load (JEDEC Method)	I_{FSM}	500.0		Amps
Maximum instantaneous forward voltage at 100A (NOTE 1)	V_F	1.05		Volts
Non-repetitive peak reverse surge current for $10\mu\text{s}/10\text{ms}$ exponentially decaying waveform (see figure 3)	I_{RSM}	55.0		Amps
Maximum reverse leakage current at rated V_{WM} $T_J=25^\circ\text{C}$ $T_J=175^\circ\text{C}$	I_R	0.2	10.0	μA
Maximum thermal resistance junction to case (NOTE 2)	$R_{\theta JC}$	1.0		$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +200		$^\circ\text{C}$

NOTES:

(1) Measured on a $300\mu\text{s}$ square pulse width

(2) Mounted on alternator heat sink

NOTICE: Advanced product information is subject to change without notice