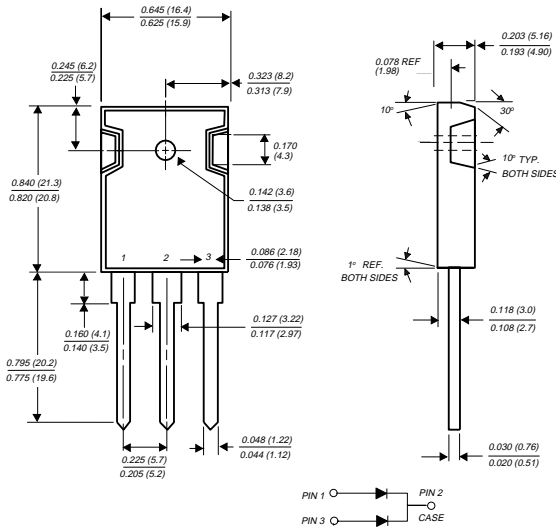


SD241P

SCHOTTKY RECTIFIER

Reverse Voltage - 45 Volts Forward Current - 30.0 Amperes

TO-247AD



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ◆ Dual rectifier construction, positive center-tap
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High current capability, low forward voltage drop
- ◆ High surge capability
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆ Guardring for overvoltage protection
- ◆ High temperature soldering guaranteed: 250°C, 0.17" (4.3mm) from case for 10 seconds



MECHANICAL DATA

Case: JEDEC TO-247AD molded plastic body
Terminals: Lead solderable per MIL-STD-750, Method 2026

Polarity: As marked

Mounting Position: Any

Mounting Torque: 10 in. - lbs. max.

Weight: 0.2 ounce, 5.6 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	SD241P	UNITS
Maximum repetitive peak reverse voltage at T _C =25°C	V _{RRM}	45	Volts
Maximum blocking voltage at T _C =25°C	V _{DC}	45	Volts
Maximum working peak reverse voltage	V _{RWM}	35	Volts
Maximum average forward rectified current at T _C =105°C	I _(AV)	30.0	Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	400.0	Amps
Peak repetitive reverse surge current (NOTE 1)	I _{RSM}	2.0	Amps
Maximum instantaneous forward voltage per leg at (NOTE 2)	I _F =10A, T _C =125°C I _F =20A, T _C =125°C	0.47 0.60	Volts
Maximum instantaneous reverse current reverse voltage per leg at V _R =35V (NOTE 2)	T _C =25°C T _C =125°C	1.0 100.0	mA
Voltage rate of change at V _R =35V	dv/dt	10,000	V/μs
Maximum thermal resistance (NOTE 3)	R _{θJC}	1.4	°C
Operating junction temperature range	T _J	-65 to +150	°C
Storage temperature range	T _{STG}	-65 to +175	°C

NOTES:

- (1) 2.0μs pulse width, f=1.0 KHz
- (2) Pulse test: 300μs pulse width, 1% duty cycle
- (3) Thermal resistance from junction of case per leg

RATINGS AND CHARACTERISTIC CURVES SD241P

FIG. 1 - FORWARD CURRENT DERATING CURVE

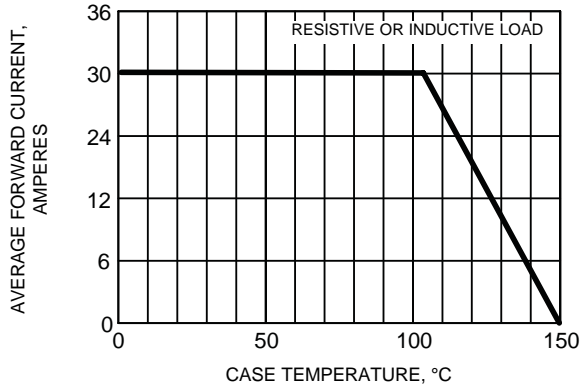


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

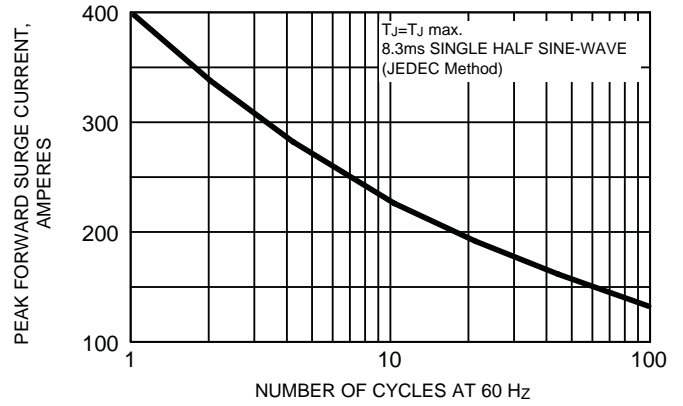


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

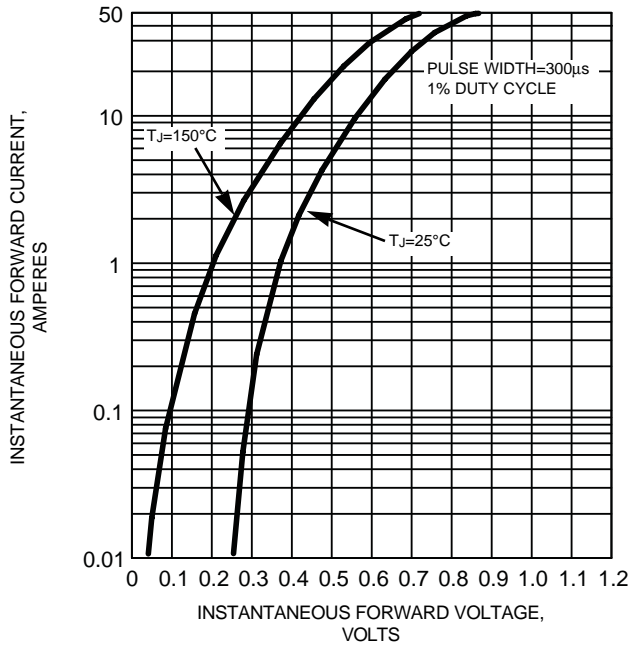


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

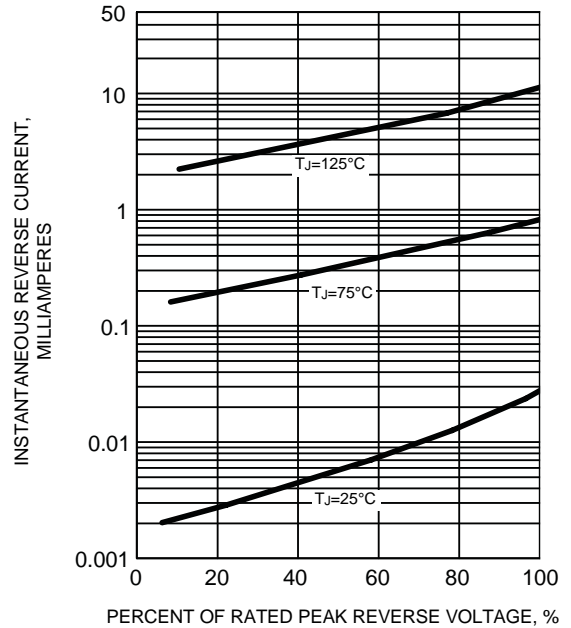


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

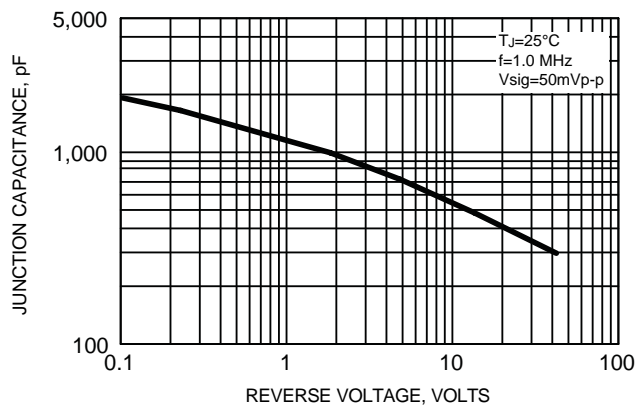


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

