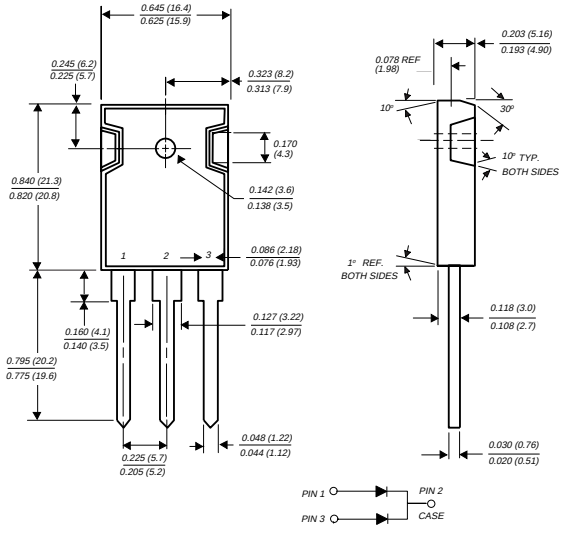
SD241P

SCHOTTKY RECTIFIER

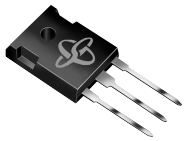
Reverse Voltage - *45 Volts* ***Forward Current -*** *30.0 Amperes*

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	V_F	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	I_R	1.0 100.0	mA
Voltage rate of change at V_R=35V		dv/dt	10,000	V/µs
Maximum thermal resistance (NOTE 3)		$R_{\Theta JC}$	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

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RATINGS AND CHARACTERISTIC CURVES SD241P

FIG. 1 - FORWARD CURRENT DERATING CURVE

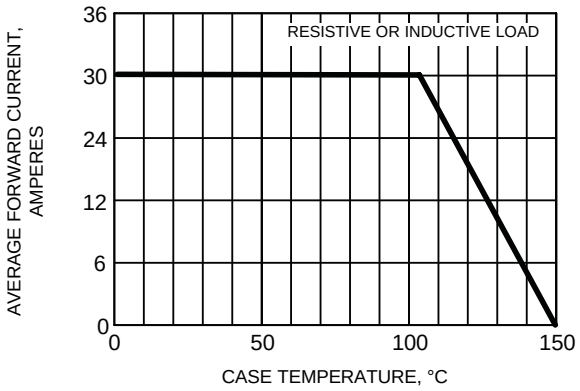


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

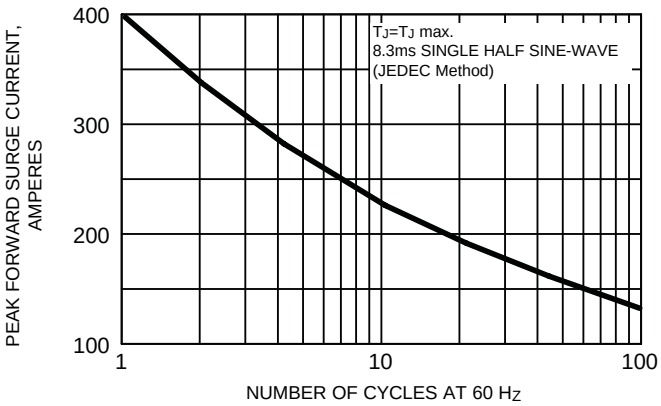


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

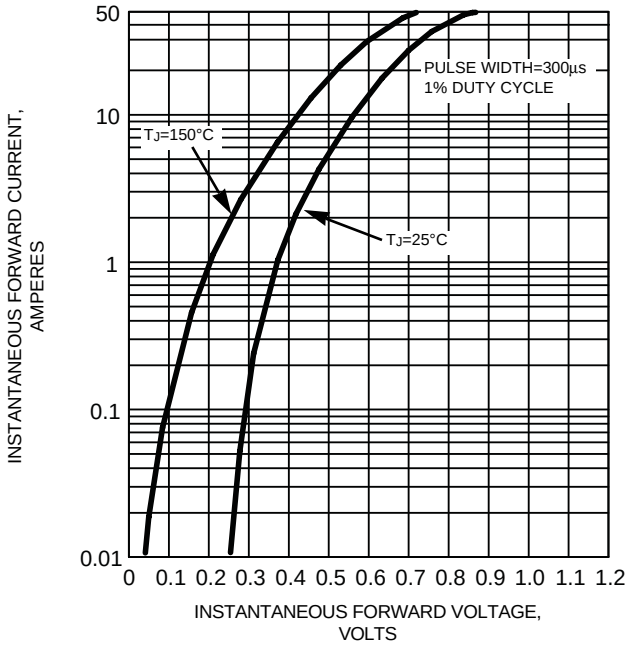


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

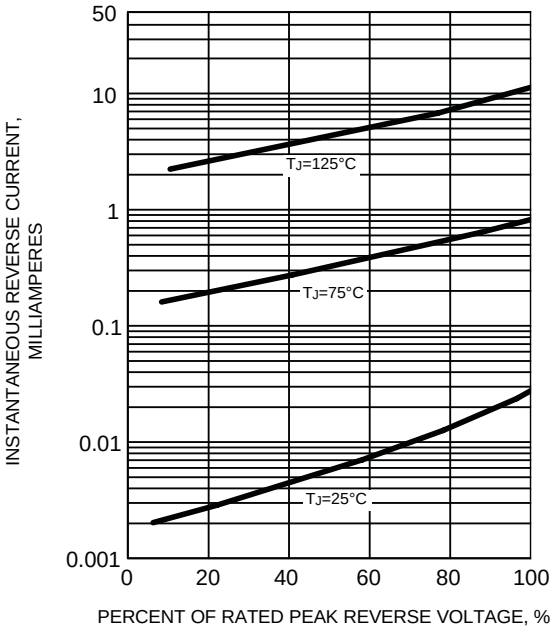


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

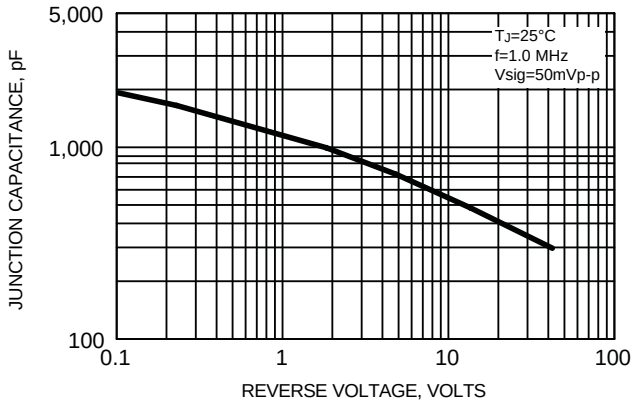
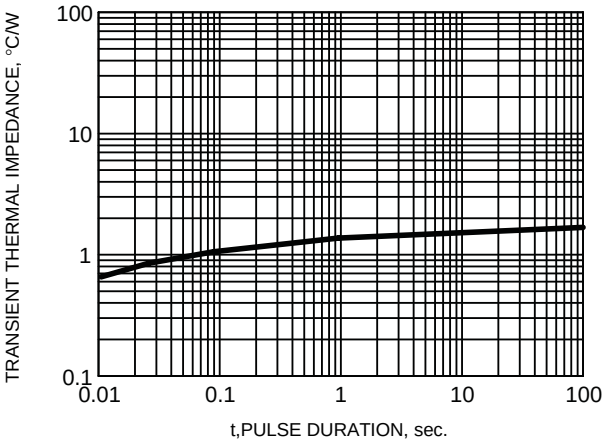


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



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