SEMICONDUCTOR

SB3050DY

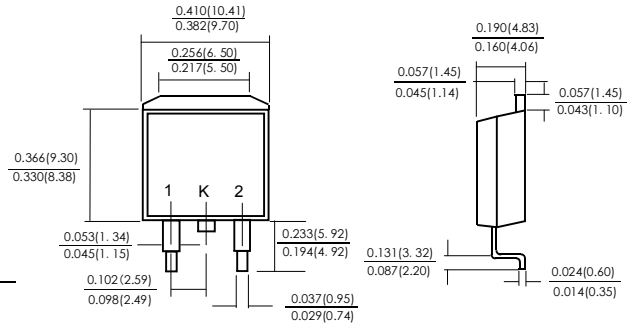
SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 50 Volts
Forward Current - 30Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- Single rectifier construction
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260℃/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2011/65/Eu and WEEE 2012/19/Eu

TO-263AC
D2PAK



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: JEDEC TO-263AC molded plastic body
- Terminals: Solderable per MIL-STD-202,method 208
- Polarity: As marked
- Mounting Position: Any
- Weight: 1.35 gram (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25℃ ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

	Symbols	SB3050DY	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	Volts
Maximum RMS voltage	V_{RMS}	35	Volts
Maximum DC blocking voltage	V_{DC}	50	Volts
Maximum average forward rectified current See Fig. 1	$I_{(AV)}$	30.0	Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	450	Amps
Maximum instantaneous forward voltage at 30.0 A	V_F	0.55	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) T_c=25℃	I_R	250	μA
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) T_c=100℃	I_R	50	mA
Typical thermal resistance (Note 2)	$R_{\theta JC}$	1.5	℃/W
Storage temperature range	T_{STG}	-55 to+200	℃
Operating junction temperature range at reduced reverse voltage VR<=80%VRRM VR<=50%VRRM in DC forward model	T_J	-55 to+150 -55 to+175 -55 to+200	℃

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle
2.Thermal resistance from junction to case

RATINGS AND CHARACTERISTIC CURVES SB3050DY

FIG.1-FORWARD CURRENT DERATING CURVE

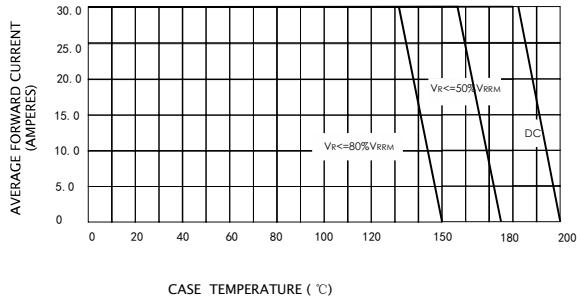


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

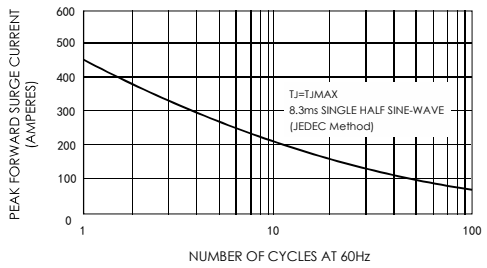


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

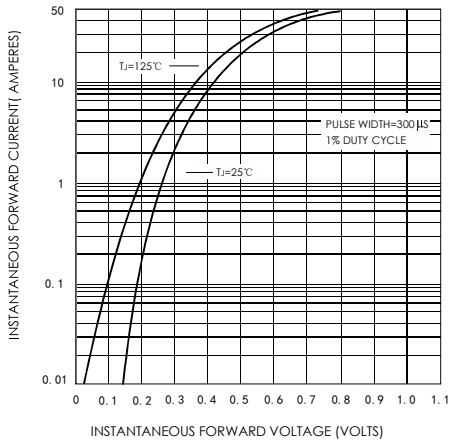


FIG.4-TYPICAL REVERSE CHARACTERISTICS

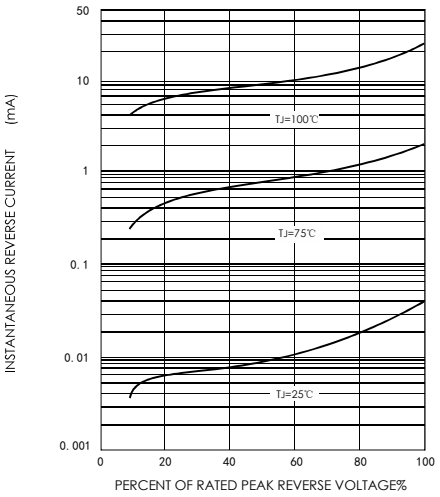


FIG.5-TYPICAL JUNCTION CAPACITANCE

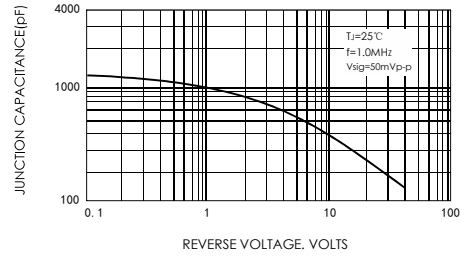


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE