



SB620DC THRU SB660DC

DPAK SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE - 20 to 60 Volts CURRENT - 6.0 Amperes

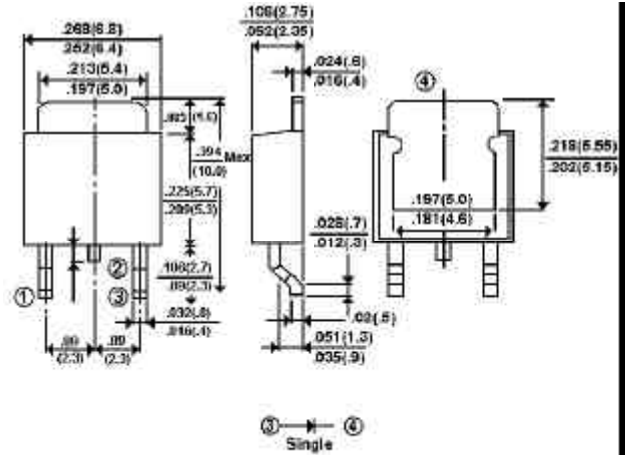
FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal silicon rectifier
- majority carrier conduction
- Low power loss, High efficiency
- High current capability, low V_F
- High surge capacity
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed: 260 °C/10 seconds at terminals

MECHANICAL DATA

- Case: DPAK/TO-252AA molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode
- Standard packaging: 16mm tape (EIA-481)
- Weight: 0.015 ounce, 0.4 gram

DPAK/TO-252AA



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

Resistive or inductive load.

	SYMBOLS	SB620DC	SB630DC	SB640DC	SB650DC	SB660DC	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	Volts
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	Volts
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	Volts
Maximum Average Forward Rectified Current at $T_C=75\text{ }^\circ\text{C}$	$I_{(AV)}$	per Diode		3.0			Amps
		per Device		6.0			
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	75.0					Amps
Maximum Instantaneous Forward Voltage at 6.0A (Note 1)	V_F	0.55			0.65		Volts
Maximum DC Reverse Current $T_A=25\text{ }^\circ\text{C}$ (Note 1) At Rated DC Blocking Voltage $T_A=100\text{ }^\circ\text{C}$	I_R	0.1			15.0		mA
Maximum Thermal Resistance (Note 2)	$R_{\theta KJC}$	6.0					$^\circ\text{C}/\text{W}$
	$R_{\theta KJA}$	80.0					
Operating Junction Temperature Range	T_J	-50 to +125					$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-50 to +150					$^\circ\text{C}$

NOTES:

1. Pulse Test with $PW=300\text{ }\mu\text{sec}$, 2% Duty Cycle.
2. Mounted on P.C.Board with 14mm^2 (.013mm thick) copper pad areas.

RATING AND CHARACTERISTIC CURVES

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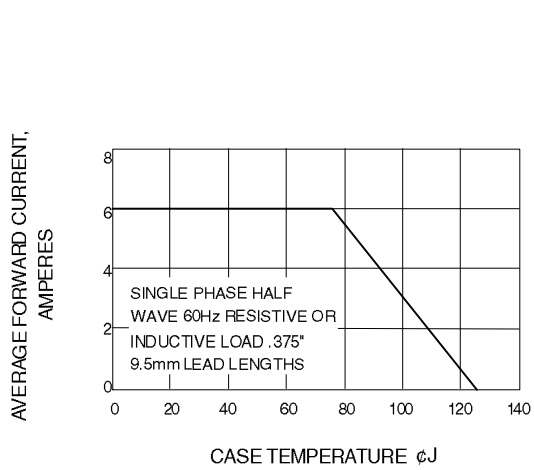


Fig. 1-FORWARD CURRENT DERATING CURVE

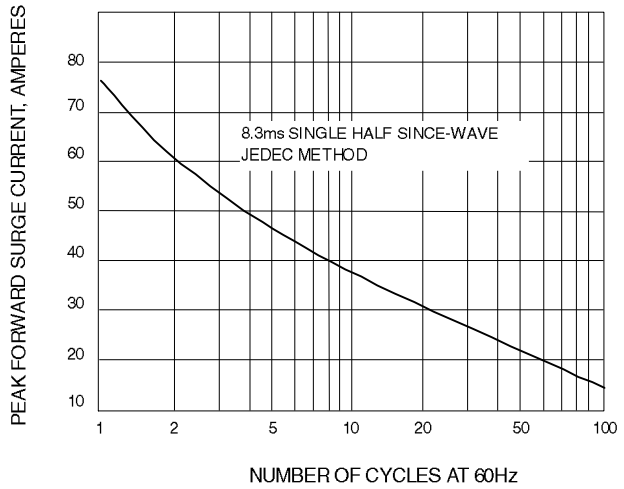


Fig. 2-MAXIMUM NON-REPETITIVE SURGE CURRENT

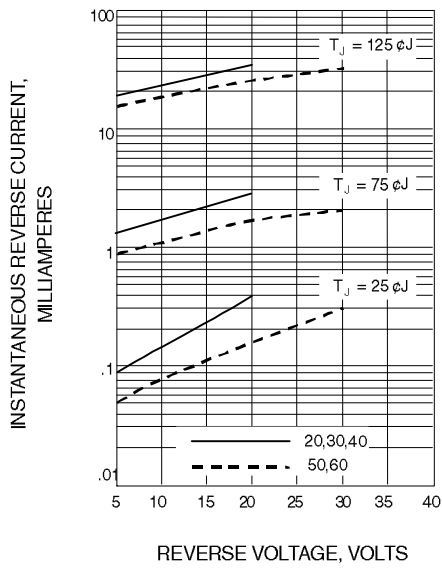


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

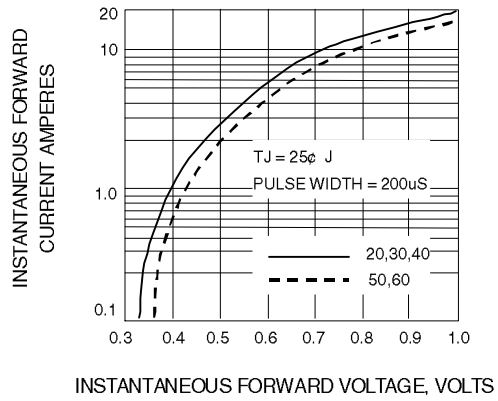


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

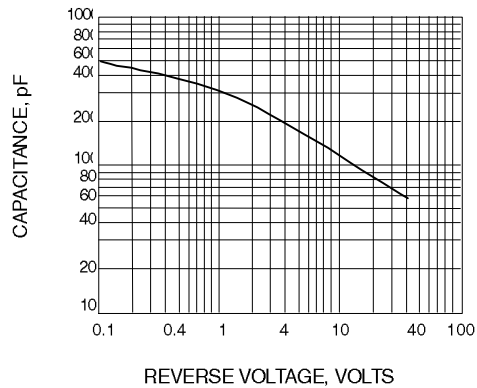


Fig. 5-TYPICAL JUNCTION CAPACITANCE