



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SPB2045
THRU
SPB2050

TECHNICAL SPECIFICATIONS OF SOLAR CELL PROTECTION SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE - 45 to 50 Volts

CURRENT - 20 Amperes

FEATURES

- * Low power loss, high efficiency
- * High current capability
- * High surge capability
- * High reliability

MECHANICAL DATA

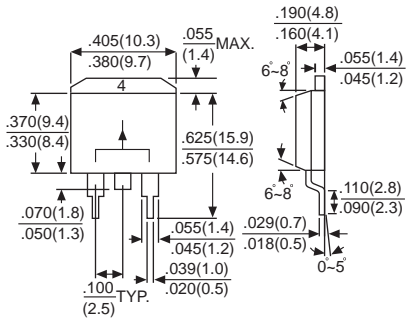
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Mounting position: Any
- * Weight: 1.7 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.



TO-263(D²PAK)



Dimensions in inches and (millimeters)

	SYMBOL	SPB2045	SPB2050	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	45	50	Volts
Maximum RMS Voltage	V _{RMS}	31.5	35	Volts
Maximum DC Blocking Voltage	V _{DC}	45	50	Volts
Maximum Average Forward Rectified Current at Derating Case Temperature	I _O	20		Amps
Peak Forward Surge Current I _{FSM} (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	275		Amps
Maximum Forward Voltage at 20A DC	V _F	0.55		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ T _C = 25°C	0.5		mAmps
	@ T _C = 100°C	50		
Typical Thermal Resistance (Note 1)	R _{θJC}	1.5		°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150		°C

Note : 1. Thermal Resistance Junction to Case per leg.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES (SPB2045 THRU SPB2050)

FIG.1
TYPICAL FORWARD CURRENT DERATING CURVE

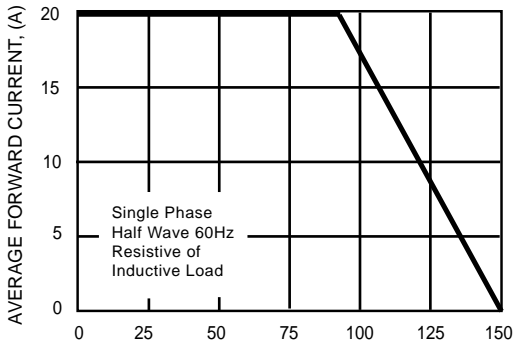


FIG.2
MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

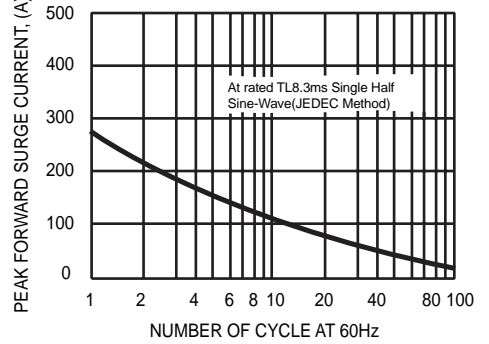


FIG.3
TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

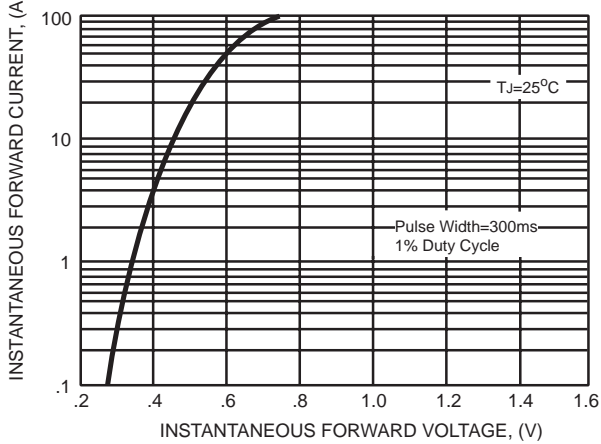


FIG.4
TYPICAL REVERSE CHARACTERISTICS

