



*DC COMPONENTS CO., LTD.*

RECTIFIER SPECIALISTS

SDC2040C  
THRU  
SDC2045C

TECHNICAL SPECIFICATIONS OF SOLAR CELL PROTECTION SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE - 40 to 45 Volts

CURRENT - 20 Amperes

**FEATURES**

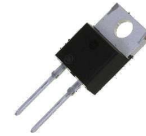
- \* Low power loss, high efficiency
- \* High current capability
- \* High surge capability
- \* High reliability

**MECHANICAL DATA**

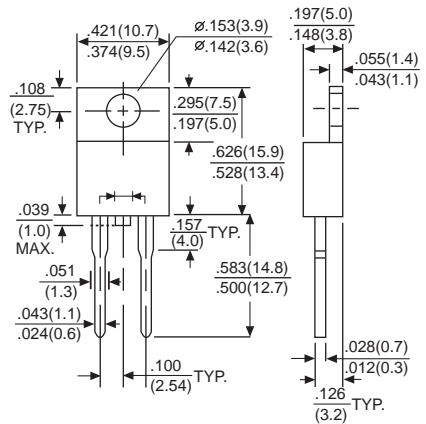
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Mounting position: Any
- \* Weight: 2.24 gram

**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-220A



Dimensions in inches and (millimeters)

	SYMBOL	SDC2040C	SDC2045C	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	40	45	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	28	31.5	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	40	45	Volts
Maximum Average Forward Rectified Current at Derating Case Temperature	I <sub>O</sub>	20		Amps
Peak Forward Surge Current I <sub>FSM</sub> (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150		Amps
Maximum Forward Voltage at 10A DC	V <sub>F</sub>	0.55		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ T <sub>C</sub> = 25°C	0.5		mAmps
	@ T <sub>C</sub> = 100°C	50		
Typical Thermal Resistance (Note 1)	R <sub>θJC</sub>	1.5		°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-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 (SDC2040C THRU SDC2045C)

FIG.1  
TYPICAL FORWARD CURRENT DERATING CURVE

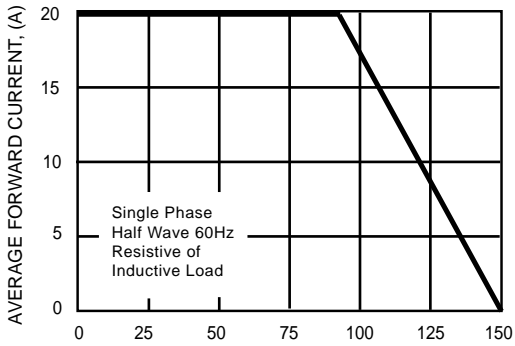


FIG.2  
MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

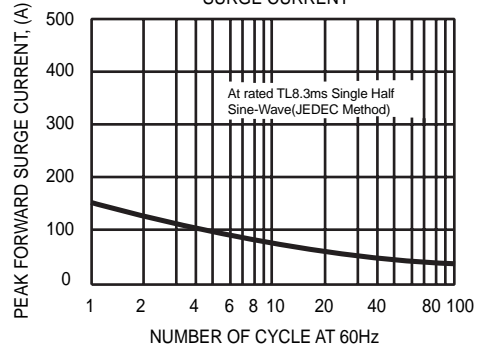


FIG.3  
TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

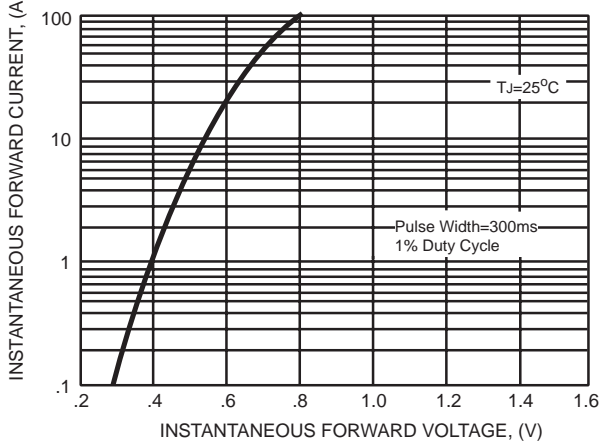


FIG.4  
TYPICAL REVERSE CHARACTERISTICS

