

## DC COMPONENTS CO., LTD.

#### RECTIFIER SPECIALISTS

SD1020D THRU SD10100D

# TECHNICAL SPECIFICATIONS OF SCHOTTKY BARRIER RECTIFIER VOLTAGE RANGE - 20 to 100 Volts CURRENT - 10 Amperes

#### **FEATURES**

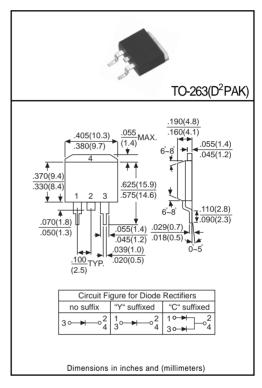
- \* Metal to silicon rectifier majority carrier conduction
- \* Low power loss, High efficiency
- \* High current capability
- \* Low forward voltage drop
- \* High surge capacity
- \* For use in low voltage high frequency inverters, free wheeling, and polarity protection applications

#### MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per
  - MIL-STD-750, Method 2026
- \* Mounting position: Any
- \* Weight: 1.7 grams Approx.

#### 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%.



		SYMBOL	SD1020D	SD1030D	SD1040D	SD1050D	SD1060D	SD1080D	SD10100D	UNITS
Maximum Recurrent Peak Reverse Voltage		VRRM	20	30	40	50	60	80	100	Volts
Maximum RMS Voltage		VRMS	14	21	28	35	42	56	70	Volts
Maximum DC Blocking Voltage		VDC	20	30	40	50	60	80	100	Volts
Maximum Average Forward Rectified Current at TC=100°C		lo	10							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		IFSM	150							Amps
Maximum Instantaneous Forward Voltage at 5.0A DC		VF	0.65		0.75		0.85		Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	@TA = 25°C	lr	5.0							-mAmps
	@Ta = 100°C		100							
Typical Thermal Resistance (Note1)		RθJA	80							°C/W
Typical Junction Capacitance (Note 2)		CJ	700							pF
Storage Operating Temperature Range		TJ, TSTG	-55 to + 150						°C	

Note: 1. Mounted on PC Board with 14mm<sup>2</sup> (0.013mm thick) copper pad areas.

2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

REV-3,MAR,2017 1 www.dccomponents.com

### RATING AND CHARACTERISTIC CURVES (SD1020D THRU SD10100D)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE 10 AVERAGE FORWARD CURRENT, (A) 8.0 Single Phase Half Wave 60Hz 6.0 Resistive or Inductive Load 4.0 2.0 0 0 30 120 150 180

FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

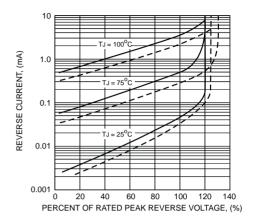


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

CASE TEMPERATURE, (°C)

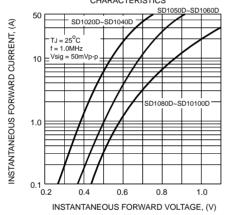


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

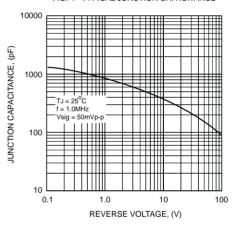
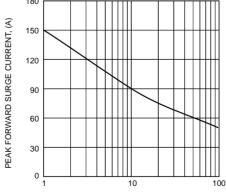


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



#### **Disclaimer**

Any Customer or user of this document or products described herein in such applications shall assume all risks of such use and will agree to hold *DC COMPONENTS* are harmless against all damages.

*DC COMPONENTS* disclaims any and all liability arising out of the application or use of any product, including consequential or incidental damages. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

*DC COMPONENTS* reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to this document and any product described herein, and disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Unless otherwise in writing, *DC COMPONENTS* products are intended for use as general electronic components in standard applications (eg: Consumer electronic, Computer equipment, Office equipment, etc.), and not recommended for use in a high specific application where a failure or malfunction of the device could result in human injury or death (eg: Aerospace equipment, Submarine cables, Combustion equipment, Safety devices, Life support systems, etc.)

Customers using or selling *DC COMPONENTS* products not expressly indicated for use in such applications do so at their own risk. If customer intended to use *DC COMPONENTS* standard quality grade devices for applications not envisioned by *DC COMPONENTS*, please contact our sales representatives in advance.

