

SD1645

SCHOTTKY BARRIER RECTIFIER DIODE

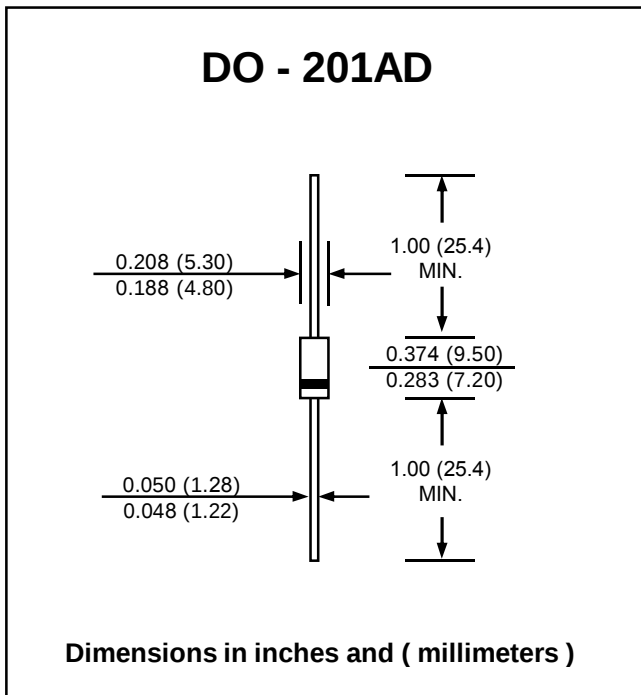
PRV : 45 Volts
I_o : 16 Amperes

FEATURES :

- * High current capability
- * High surge capacity
- * High efficiency
- * Low forward voltage drop
- * Low power loss
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : DO-201AD Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 1.1 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

RATING	SYMBOL	VALUE	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	V
Maximum Working Peak Reverse Voltage	V_{RWM}	45	V
Maximum DC Blocking Voltage	V_{DC}	45	V
Maximum Average Forward Current at $T_c = 25^\circ\text{C}$	$I_{F(AV)}$	16	A
Maximum Peak Forward Surge Current @ 10ms sine wave	I_{FSM}	300	A
Maximum Instantaneous Forward Voltage at $I_F = 16\text{ A}$	V_F	0.55	V
Maximum Reverse Current at $T_J = 25^\circ\text{C}$	I_R	0.20	mA
Rated DC Blocking Voltage (Note 1) at $T_J = 125^\circ\text{C}$	$I_{R(H)}$	70	mA
Maximum Junction Capacitance (Note 2)	C_J	900	pF
Typical Thermal Resistance Junction to Lead (Note 3)	$R_{\theta JL}$	8.0	K/W
Operating Junction Temperature	T_J	- 65 to + 200	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 65 to + 175	$^\circ\text{C}$

Notes :

- (1) Pulse Test : Pulse Width = 300 μs , Duty Cycle = 2%.
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 V.
- (3) Thermal resistance from junction to lead vertical PC board mounting, 9.5 mm lead length.

RATING AND CHARACTERISTIC CURVES (SD1645)

FIG.1 - FORWARD CURRENT DERATING CURVE

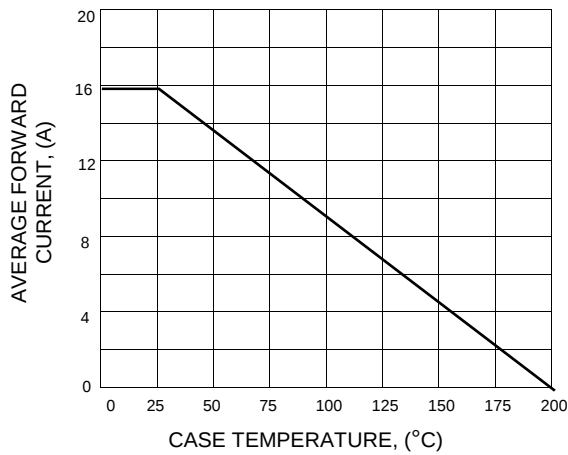


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

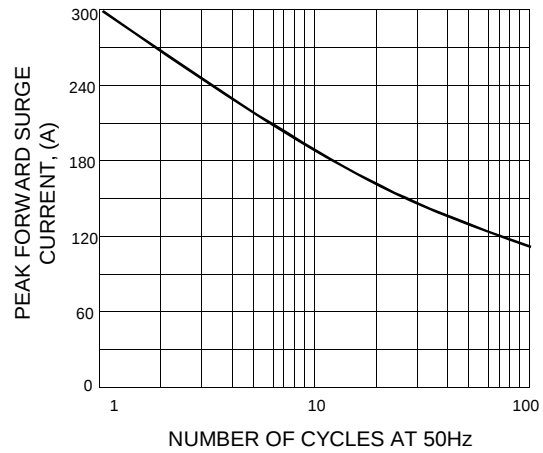


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

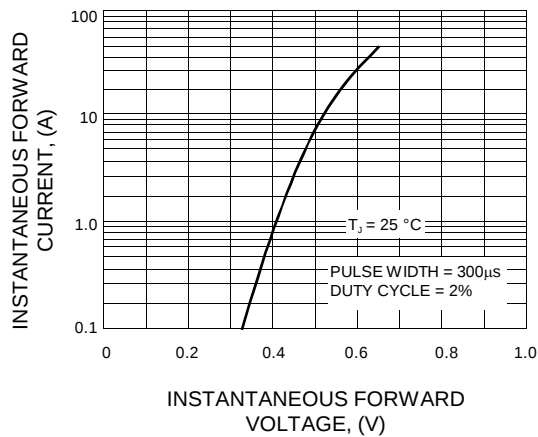


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

