

SD1245

SCHOTTKY BARRIER RECTIFIER DIODE

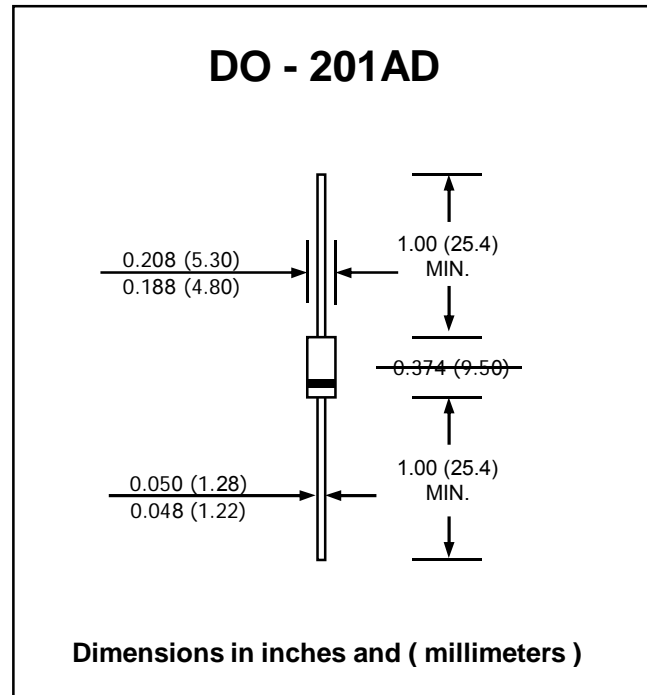
PRV : 45 Volts
I_o : 12 Amperes

FEATURES :

- * High current capability
- * Low forward voltage drop
- * High surge capacity
- * Low power loss, High efficiency
- * Guard ring for transient protection
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : DO-201AD Molded plastic
- * Epoxy : UL94V-0 rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208
- * 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.

RATING	SYMBOL	VALUE	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	45	V
Maximum Surge Peak Reverse Voltage	V_{RSM}	45	V
Maximum Average Forward Current at $T_a = 50\text{ }^\circ\text{C}$ (Note 1)	$I_{F(AV)}$	12	A
Maximum Peak Forward Surge Current, 50 Hz half sine wave 60 Hz half sine wave	I_{FSM}	280	A
		320	
Maximum Forward Voltage at $I_F = 5\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$ at $I_F = 12\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$	V_F	0.45	V
		0.55	
Maximum Reverse Current at $V_R = V_{RRM}$ @ ($T_j = 25\text{ }^\circ\text{C}$) @ ($T_j = 125\text{ }^\circ\text{C}$)	I_R	0.50	mA
	$I_{R(H)}$	70	mA
Typical Thermal Resistance Junction to Ambient air	$R_{\theta JA}$	14	K/W
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	4	K/W
Operating Junction Temperature Range at reduced reverse voltage $V_R \leq 80\% V_{RRM}$ $V_R \leq 50\% V_{RRM}$ in DC forward mode	T_j	- 50 to + 150	$^\circ\text{C}$
		≤ 180 ≤ 200	
Storage Temperature Range	T_{STG}	- 50 to + 175	$^\circ\text{C}$

Note : (1) Valid, if leads are kept at ambient temperature at a distance of 10 mm from case

RATING AND CHARACTERISTIC CURVES (SD1245)

FIG.1 - FORWARD CURRENT DERATING CURVE

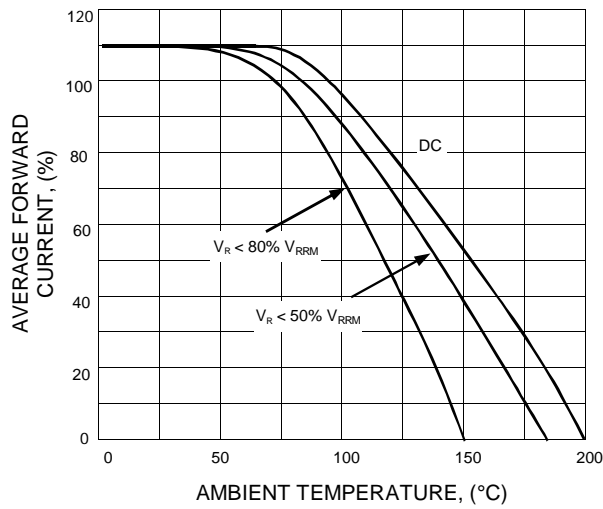


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

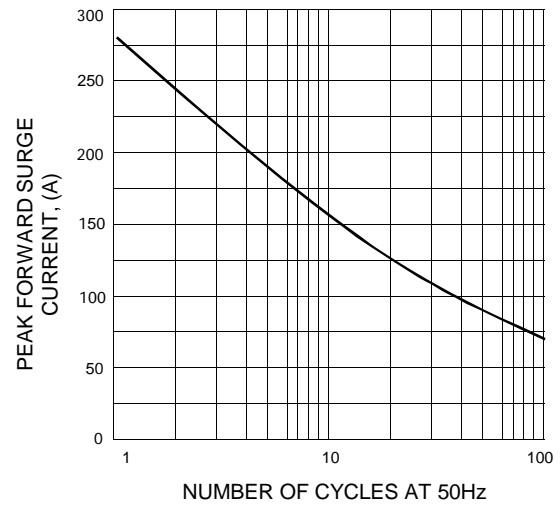


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

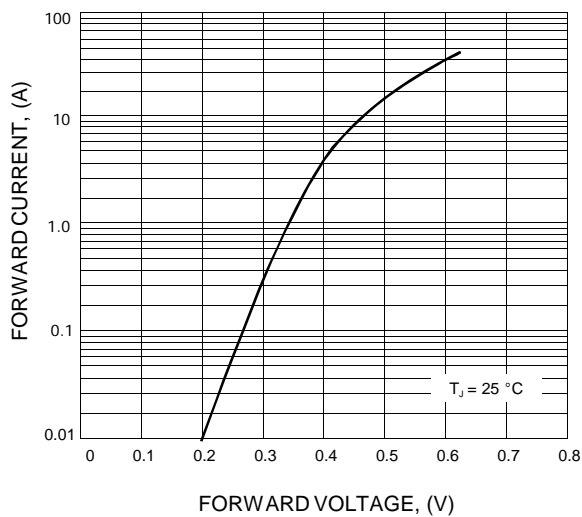


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

