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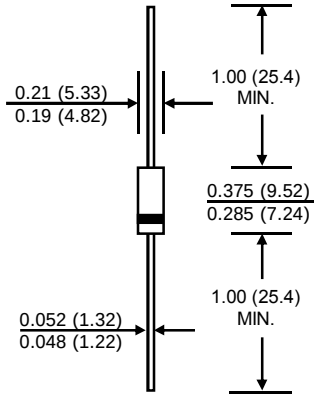
SD1245

SCHOTTKY BARRIER RECTIFIER DIODE

PRV : 45 Volts
Io : 12 Amperes

DO-201AD



Dimensions in inches and (millimeters)

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 Ta = 50 °C (Note 1)	$I_{F(AV)}$	12	A
Maximum Peak Forward Surge Current, 50 Hz half sine wave	I_{FSM}	280	A
60 Hz half sine wave		320	
Maximum Forward Voltage at I_F = 5 A ,Tj = 25 °C	V_F	0.45	V
at I_F = 12 A ,Tj = 25 °C		0.55	
Maximum Reverse Current at @ (T_J = 25 °C)	I_R	0.50	mA
$V_R = V_{RRM}$ @ (T_J = 125 °C)	$I_{R(H)}$	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	T_J		°C
at reduced reverse voltage $V_R \le 80\%\ V_{RRM}$		- 50 to + 150	
$V_R \le 50\%\ V_{RRM}$		≤ 180	
in DC forward mode		≤ 200	
Storage Temperature Range	T_{STG}	- 50 to + 175	°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

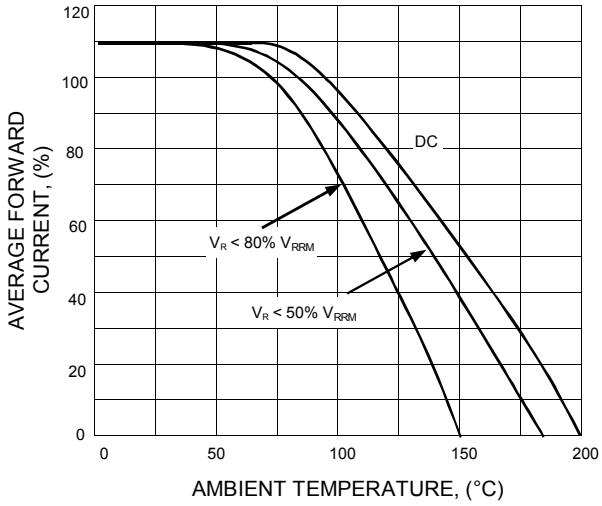


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

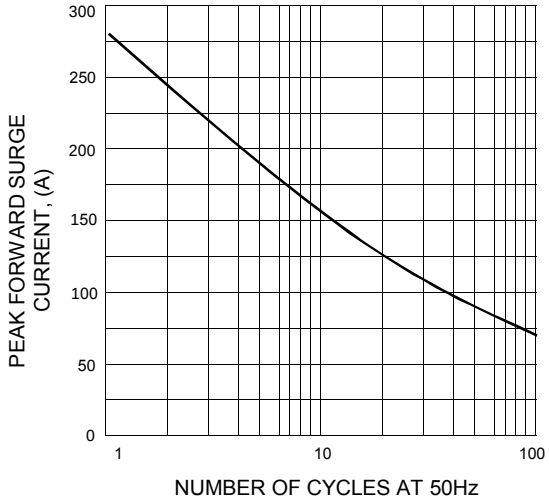


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

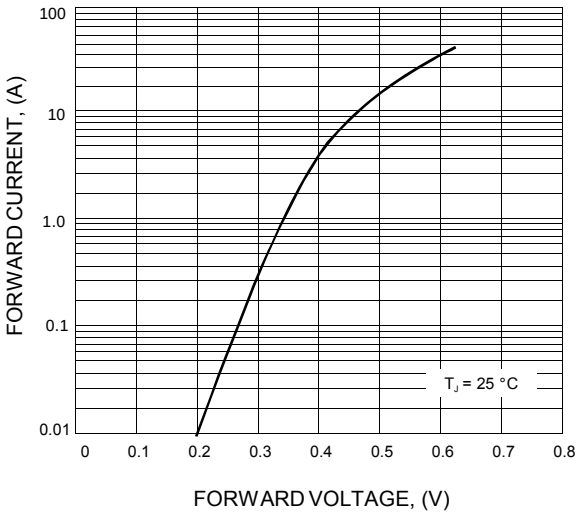


FIG.4 - TYPICAL REVERSE CHARACTERISTICS