BY296 THRU BY299

FAST RECOVERY RECTIFIERS

Reverse Voltage - 100 to 800 V Forward Current - 2 A

Features

- · Low forward voltage drop
- Low cost
- Low leakage
- · High current capability

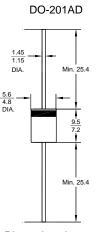
Mechanical Data

• Case: DO-201AD, Molded plastic

• Terminals: Axial leads, solderable per MIL-STD -202,

method 208 guaranteed

• Polarity: Color band denotes cathode



Dimensions in mm

Absolute Maximum Ratings and 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%.

Symbols	BY296	BY297	BY298	BY299	Units
V_{RRM}	100	200	400	800	V
V_{RMS}	70 140 280 560			V	
V_{DC}	100	200	400	800	V
I _{F(AV)}	2				Α
I _{FSM}	70			А	
V _F	1.3			V	
I _R	10 100			μΑ	
t _{rr}	500			ns	
CJ	32			pF	
$R_{\theta JA}$	22			°C/W	
T_J , T_S	- 55 to + 150			°C	
	$\begin{array}{c} V_{RRM} \\ V_{RMS} \\ V_{DC} \\ \\ I_{F(AV)} \\ \\ I_{FSM} \\ \\ V_{F} \\ \\ I_{R} \\ \\ t_{rr} \\ \\ C_{J} \\ \\ R_{\theta JA} \\ \end{array}$	V _{RRM} 100 V _{RMS} 70 V _{DC} 100 I _{F(AV)} I _{FSM} V _F I _R t _{rr} C _J R _{0JA}	V _{RRM} 100 200 V _{RMS} 70 140 V _{DC} 100 200 I _{F(AV)} 2 I _{FSM} 7 V _F 1 I _R 10 t _{rr} 50 C _J 3 R _{θJA} 2	V _{RRM} 100 200 400 V _{RMS} 70 140 280 V _{DC} 100 200 400 I _{F(AV)} 2 70 V _F 1.3 10 I _R 100 100 t _{rr} 500 500 C _J 32 R _{θJA} 22	V _{RRM} 100 200 400 800 V _{RMS} 70 140 280 560 V _{DC} 100 200 400 800 I _{F(AV)} 2 2 I _{FSM} 70 70 V _F 1.3 10 I _R 100 100 t _{rr} 500 500 C _J 32 72 R _{ØJA} 22 22

 $^{^{1)}}$ Measured with $I_F=0.5$ A, $I_R=1$ A, $I_{rr}=0.25$ A.





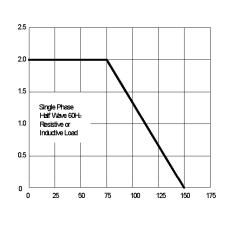
 $^{^{\}rm 2)}$ Measured at 1 MHz and applied reverse voltage of 4V D.C.

³⁾ Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length.

FIG.1 - FORWARD CURRENT DERATING CURVE

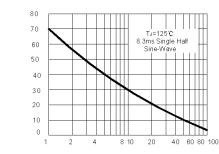
FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

AVERAGE FORWARD CURRENT **AMPERES**



PEAK FORWARD SURGE CURRENT AMPERES

INSTANTANEOUS FORWARD CURRENT



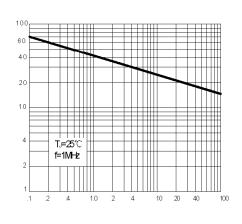
AMBIENT TEMPERATURE, °C

I,LEAD LENGTH(mm)

FIG.3 - TYPICAL JUNCTION CAPACITANCE

FIG.4 - TYPICAL FORWARD CHARACTERISTICS





REVERSE VOLTAGE, VOLTS

100 0.4 AMPERES 0.2 0.1 0.04 0.02

INSTANTANEOUS FORWARD VOLTAGE, VOLTS

SEMTECH ELECTRONICS LTD.





