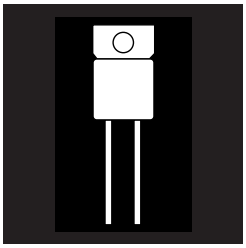
HERMETIC JEDEC TO-257AA HIGH EFFICIENCY, SOFT RECOVERY RECTIFIER



12 Amp, 800 & 1000 Volts, 50 nsec trr

FEATURES

- Small Size
- Ultra Fast Recovery
- Soft Recovery Behavior
- Extremely Low Losses At High Switching Speeds
- Low I_{RM} Rating
- Hermetic And Isolated Package
- Available Screened To MIL-S-19500, TX, TXV And S Levels

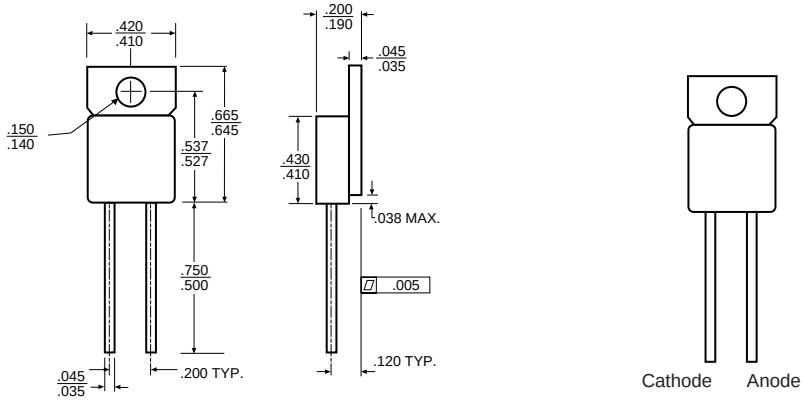
DESCRIPTION

This soft recovery, high speed rectifier is ideally suited for high performance in high voltage switching applications. The performance of this rectifier minimizes losses in power conversion and motor control circuits complementing the switching characteristics of power MOSFETs, IGBTs, and bipolar transistors.

ABSOLUTE MAXIMUM RATINGS T_C = 25°C

Peak Inverse Voltage.....800 & 1000 V
Maximum Average D.C. Output Current @ T_C = 100°C.....12 A
Surge Current (Non-Repetitve 8.3 nsec).....70 A
Thermal Resistance, Junction-To-Case.....2.0° C/W
Operating and Storage Temperature Range.....-55°C to +150°C

3.2



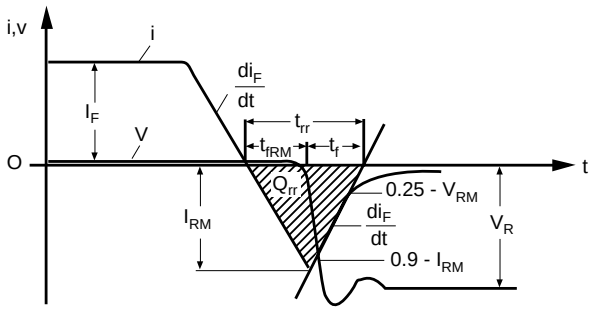
ELECTRICAL CHARACTERISTICS

Type	PIV	Maximum Forward Voltage @ 12 A		Maximum Reverse Current @ .8x PIV		Maximum Reverse Recovery Time
		T_j = 25° C	T_j = 150° C	T_j = 25° C	T_j = 125° C	
OM5010ST	800	2.9 V	2.7 V	150 µA	4 mA	50
OM5011ST	1000					

TURN-OFF CHARACTERISTICS

Symbols	Test Conditions	Min.	Typ.	Max.	Units
T_{rr}	I_F = 0.5 A; I_R = 1 A; T_J = 25°C I_F = 1 A; di/dt = -15 A/µs; V_R = 30 V; T_J = 25°C	-	-	50	ns
I_{RM}	V_R = 540 V; I_F = 12 A L .05 µH; T_J = 100°C; di_F/dt = -100 A/µs	-	6.5	7.2	A

DEFINITION OF TURN-OFF CHARACTERISTICS



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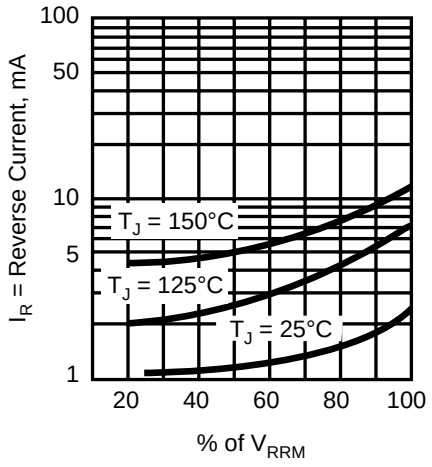
TYPICAL REVERSE CURRENT



TYPICAL FORWARD VOLTAGE