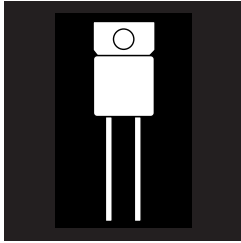


OM5001ST OM5003ST OM5005ST OM5007ST  
 OM5002ST OM5004ST OM5006ST

# 15 AMP ULTRA FAST RECTIFIER IN SMALL HERMETIC PACKAGE



15 Amp, 50 To 600 Volts, 35 To 50 ns trr

## FEATURES

- Small Size
- Very Low Forward Voltage
- Very Fast Switching Time
- Hermetic Isolated Package
- High Surge
- Low Thermal Resistance
- Available Screened To MIL-S-19500, TX, TXV And S Levels

## DESCRIPTION

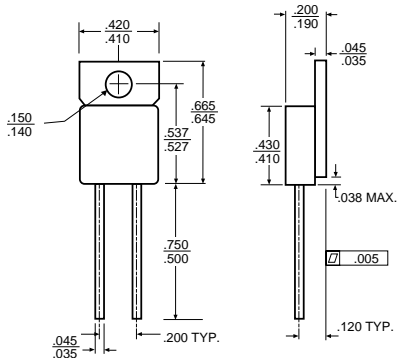
This series of products in a hermetic package is specifically designed for use at power switching frequencies in excess of 100 kHz. This series of ultra fast rectifiers is packaged in a small easy-to-use hermetic package replacing conventional DO-4 and TO-3 packaging. These devices are ideally suited for Hi-Rel applications where small size and a hermetically sealed package are required. All devices are available Hi-Rel screened in Omnirel's facility.

## ABSOLUTE MAXIMUM RATINGS @ 25°C

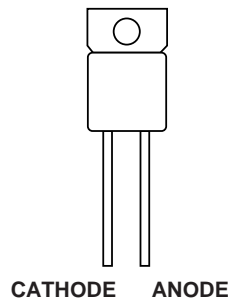
Peak Inverse Voltage . . . . . 50 to 600 V  
 Maximum Average D.C. Output Current @  $T_c = 100^\circ\text{C}$  . . . . . 15 A  
 Non-Repetitive Sinusoidal Surge Current 8.3 ms . . . . . 180 A  
 Operating and Storage Temperature Range . . . . . - 55° C to +150° C

3.2

### MECHANICAL OUTLINE



### PIN CONNECTION



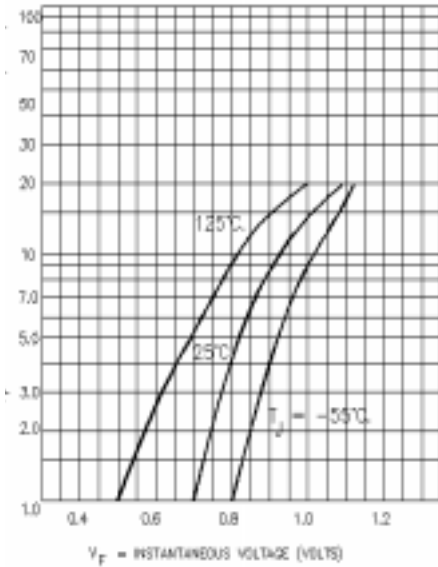
OM5001ST - OM5007ST

**ELECTRICAL CHARACTERISTICS**

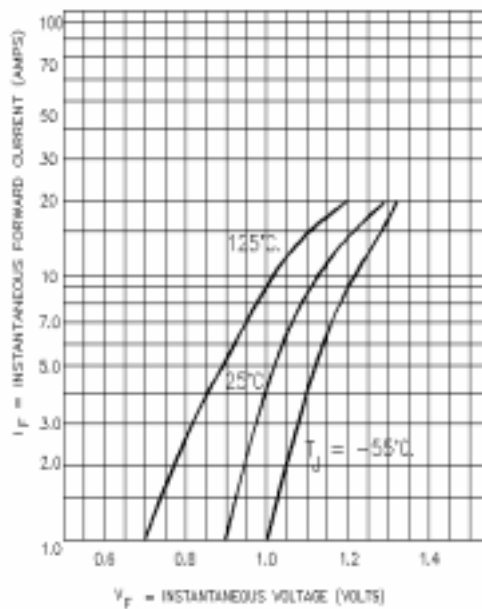
Type	PIV	Maximum Forward Voltage <sup>(1)</sup>		Maximum Reverse Current		Maximum Reverse Recovery Time <sup>(2)</sup>	Maximum Thermal Resist. $R_{\theta JC}$
		$T_j = 25^\circ\text{C}$	$T_j = 100^\circ\text{C}$	$T_j = 25^\circ\text{C}$	$T_j = 100^\circ\text{C}$		
OM5001ST	50	1.1V @ 15A	0.90V @ 15A	20 $\mu\text{A}$	1 mA	35 nsec	2.0
OM5002ST	100						
OM5003ST	150						
OM5004ST	200						
OM5005ST	300	1.35V @ 15A	1.15V @ 15A	20 $\mu\text{A}$	1 mA	50 nsec	1.8
OM5006ST	400						
OM5007ST	600	1.6V @ 15 A	1.4V @ 15A	20 $\mu\text{A}$	2 mA	50 nsec	1.8

(1) Pulse Test: Pulse Width = 300 $\mu\text{s}$ , Duty Cycle = 2.0%. (2) Measured in Circuit:  $I_F = 0.5\text{ A}$ ,  $I_R = 1.0\text{ A}$ ,  $I_{REC} = 0.25\text{ A}$

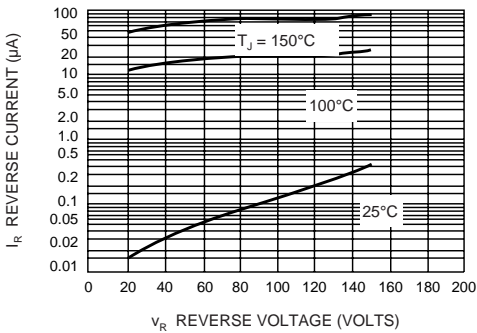
**50 V TO 200 V  
TYPICAL FORWARD VOLTAGE  
OM5001, 5002, 5003, 5004**



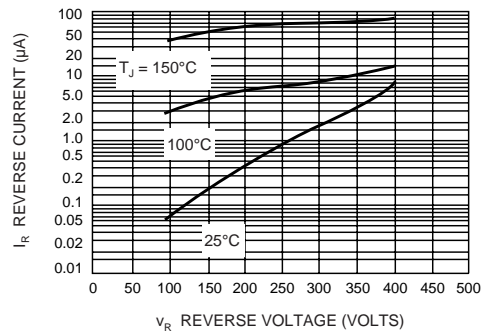
**300 V TO 400V  
TYPICAL FORWARD VOLTAGE  
OM5005, 5006**



**TYPICAL REVERSE CURRENT  
OM5001, 5002, 5003, 5004**



**TYPICAL REVERSE CURRENT  
OM5005, 5006**



3.2