

# BYV28-50-BYV28-600

## ULTRAFAST RECOVERY RECTIFIERS

### FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

### MAXIMUM RATINGS

Parameter	Test Condition	Part	Symbol	Value	Unit
Peak reverse voltage, non-repetitive		BYV28-50	$V_{RSM}$	55	V
		BYV28-100		110	
		BYV28-150		165	
		BYV28-200		220	
		BYV28-300		330	
		BYV28-400		440	
		BYV28-500		560	
		BYV28-600		675	
Reverse voltage = repetitive peak reverse voltage		BYV28-50	$V_R = V_{RRM}$	50	V
		BYV28-100		100	
		BYV28-150		150	
		BYV28-200		200	
		BYV28-300		300	
		BYV28-400		400	
		BYV28-500		500	
		BYV28-600		600	
Peak forward surge current	$t_p = 10\text{ms}$ , half-sine wave		$I_{FSM}$	90	A
Repetitive peak forward current			$I_{FRM}$	25	A
Average forward current			$I_{FAV}$	3.5	A
Pulse energy in avalanche mode, non repetitive (inductive load switch off)	$I_{(BR)R} = 0.6\text{A}$ , $T_J = 175^\circ\text{C}$		$E_R$	20	mJ
Junction and storage temperature range			$T_J, T_{STG}$	-65 to +175	$^\circ\text{C}$
Junction ambient	$l = 10\text{mm}$ , $T_L = \text{constant}$		$R_{thJA}$	25	K/W
	On PC board with spacing 37.5 mm		$R_{thJA}$	70	K/W

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

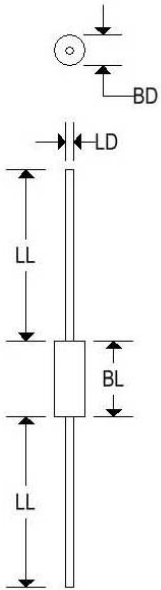
Parameter	Test Condition	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 5\text{A}$	$V_F$			1.1	V
	$I_F = 5\text{A}$ , $T_J = 175^\circ\text{C}$				0.89	
Reverse current	$V_R = V_{RRM}$	$I_R$			1	$\mu\text{A}$
	$V_{RSM}$				100	
	$V_R = V_{RRM}$ , $T_J = 165^\circ\text{C}$				150	
Reverse recovery time	$I_F = 0.5\text{A}$ , $I_R = 1\text{A}$ , $i_R = .25\text{A}$	$t_{rr}$			30	ns

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### MECHANICAL CHARACTERISTICS

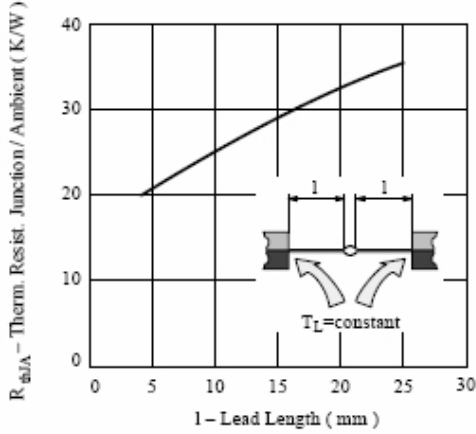
<b>Case</b>	SOD-64
<b>Marking</b>	Alpha numeric
<b>Polarity</b>	Cathode band



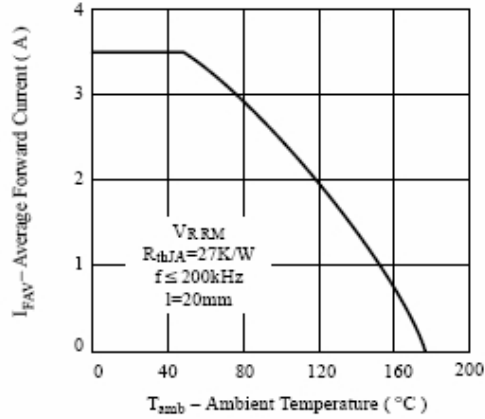
	SOD-64			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	0.169	0.250	4.300	6.350
BL	-	0.300	-	7.620
LD	0.048	0.053	1.219	1.350
LL	1.024	1.102	26.000	28.000

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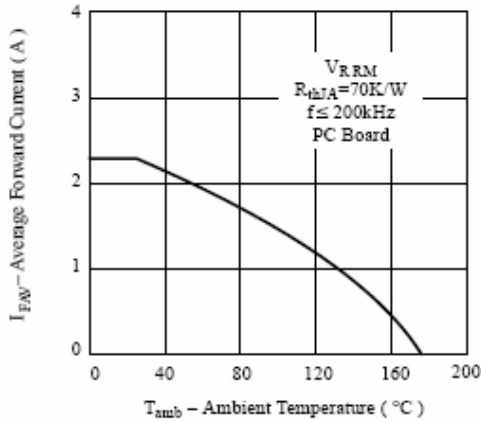
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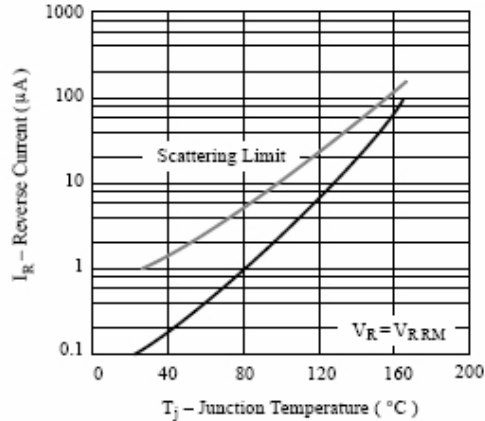
Max. Thermal Resistance vs. Lead Length



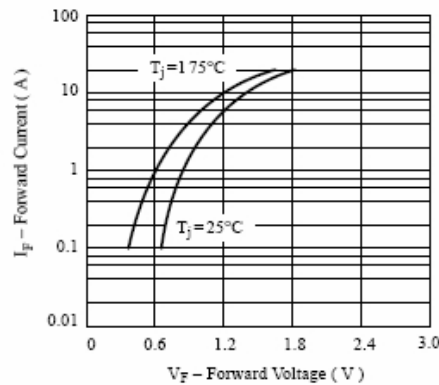
Max. Average Forward Current vs. Ambient Temperature



Max. Average Forward Current vs. Ambient Temperature



Reverse Current vs. Junction Temperature



Max. Forward Current vs. Forward Voltage