

DIGITRON SEMICONDUCTORS

BYV28-50 – BYV28-600

ULTRA FAST SILICON RECTIFIERS

MAXIMUM RATINGS ($T_J = 25^\circ\text{C}$ unless otherwise specified)

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 ($T_J = 25^\circ\text{C}$)

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	μA
	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

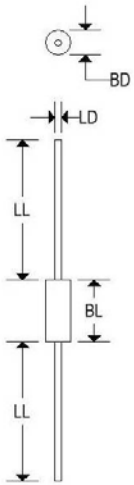
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MECHANICAL CHARACTERISTICS

Case	SOD-64
Marking	Body painted, alpha numeric
Polarity	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

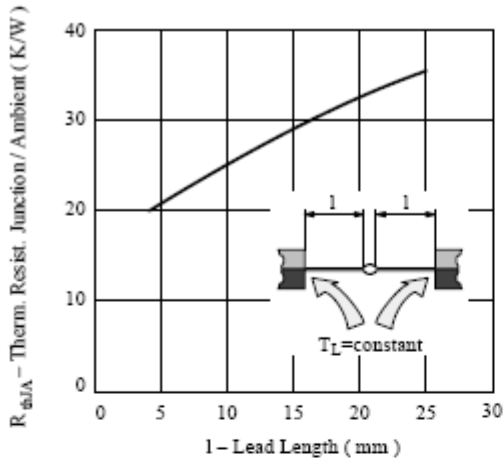
Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).

Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.

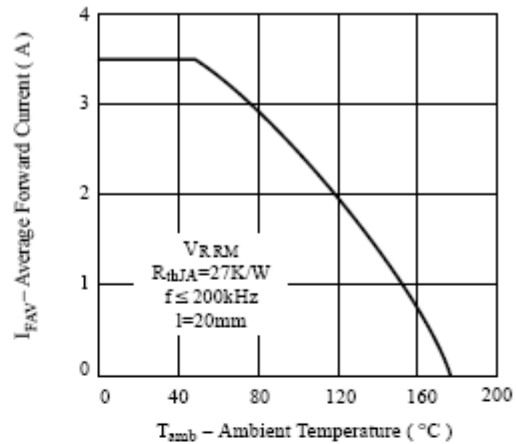
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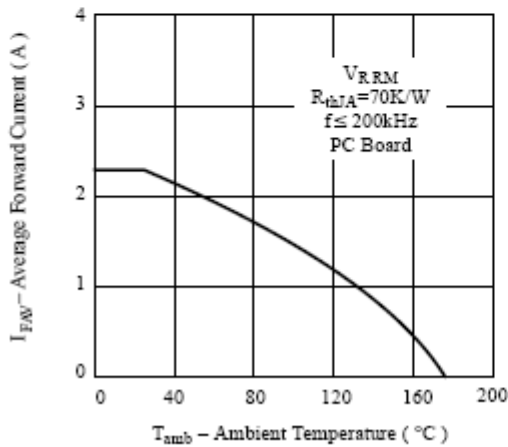
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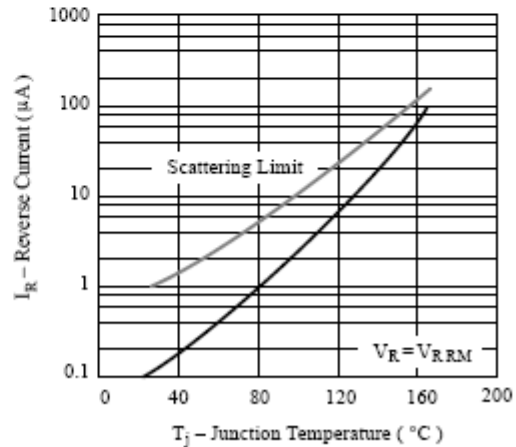
Max. Thermal Resistance vs. Lead Length



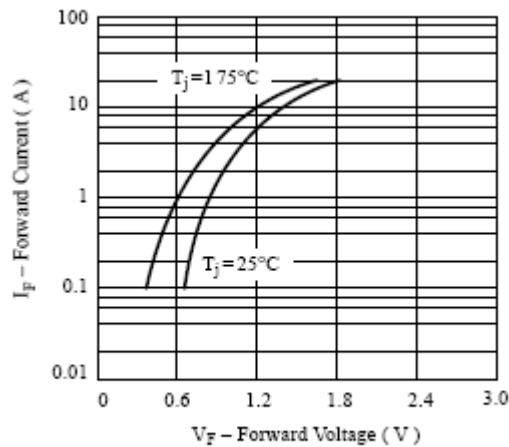
Max. Average Forward Current vs. Ambient Temperature



Max. Average Forward Current vs. Ambient Temperature



Reverse Current vs. Junction Temperature



Max. Forward Current vs. Forward Voltage