DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

BYV95 SERIES
BYV96 SERIES

FAST 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 AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	BYV95A	BYV95B	BYV95C	BYV96D	BYV96E	Units
Maximum recurrent peak reverse voltage	V_{RRM}	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	200	400	600	800	1000	Volts
Minimum avalanche breakdown voltage @ 100µA	$V_{(BR)}$	300	500	700	900	1100	Volts
Maximum average forward rectified current 0.375" lead length at T_A = 55°C	$I_{(AV)}$	1.5					Amps
Peak forward surge current, 10ms single half sine-wave superimposed on rated load @ T_J = 165°	I_{FSM}	35.0					Amps
Maximum instantaneous forward voltage @1.5A **T_J = 25°C** **T_J = 165°C**	V_F	1.6 1.35					Volts
Maximum full load reverse current full cycle average, 0.375" lead length at **T_J = 25°C** **T_J = 165°C**	$I_{R(AV)}$	1.0 150.0					µA
Maximum DC reverse current at rated DC blocking voltage	I_R	2.0					µA
Maximum reverse recovery time [1]	t_{rr}	250			300		ns
Typical junction capacitance [2]	C_J	10.0					pF
Typical thermal resistance [3]	$R_{\theta JA}$	55.0					°C/W
Operating junction temperature range	T_J	-65 to +175					°C
Storage temperature range	T_{stg}	-65 to +200					°C

1. Measure with I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Volts
3. Thermal resistance from junction to ambient at 0.375" lead length, PC board mounted

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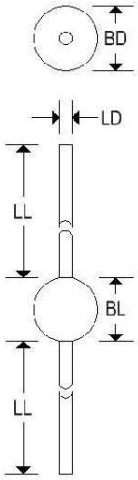
MECHANICAL CHARACTERISTICS

Case	SOD-57
Marking	Body painted, alpha-numeric
Polarity	Cathode band



	SOD-57			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	-	0.142	-	3.600
BL	-	0.157	-	4.000
LD	-	0.032	-	0.820
LL	1.024	-	26.000	-

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FIG. 1 - FORWARD CURRENT DERATING CURVE

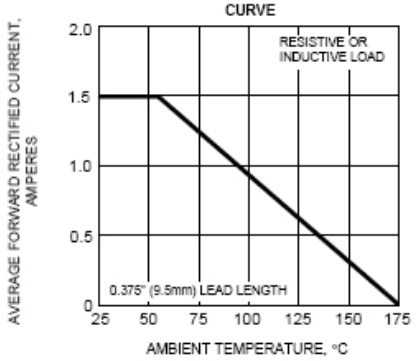

FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

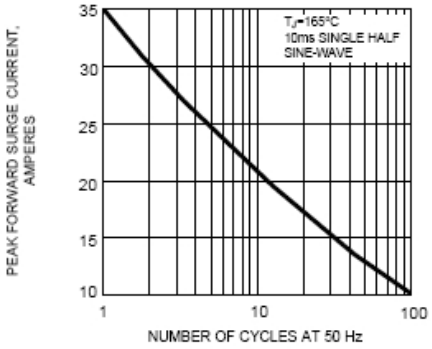

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

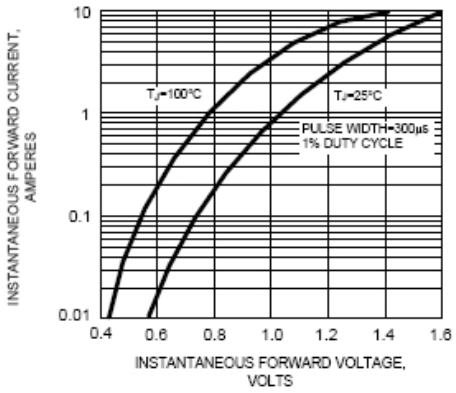

FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

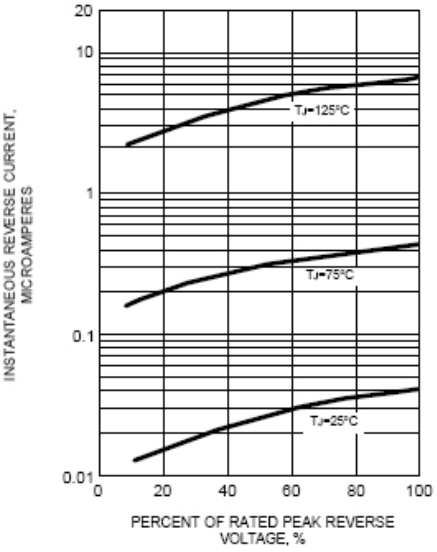

FIG. 5 - TYPICAL JUNCTION CAPACITANCE