Silicon Diode

BYW29-150

Fast Efficient Rectifier

150V / 8A

DATASHEET

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OEM – General Semiconductor

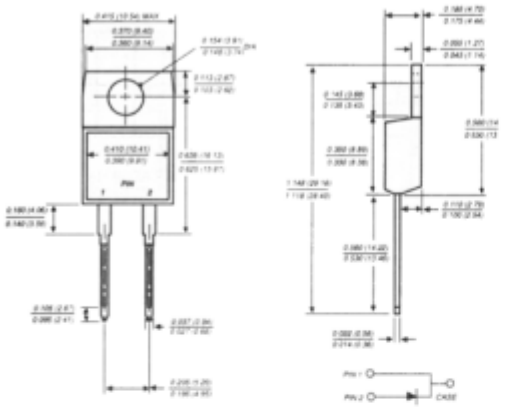
Source: General Semiconductor Databook 1998

BYW29-50 THRU BYW29-200

FAST EFFICIENT PLASTIC RECTIFIER

***Reverse Voltage** - 50 to 200 Volts* ***Forward Current** - 8.0 Amperes*

TO-220AC



Dimensions in inches and (millimeters)

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junction
- Low power loss
- Low leakage current
- High surge current capability
- Superfast recovery time for high efficiency
- High temperature soldering guaranteed: 250°C, 0.16" (4.06mm) from case for 10 seconds

MECHANICAL DATA

Case: JEDEC TO-220AC molded plastic body over passivated chip
Terminals: Plated lead solderable per MIL-STD-750, Method 2026
Polarity: As marked
Mounting Position: Any
Weight: 0.064 ounce, 1.81 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	BYW29-50	BYW29-100	BYW29-150	BYW29-200	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	Volts
Maximum RMS voltage	V_{RMS}	35	70	105	140	Volts
Maximum DC blocking voltage	V_{DC}	50	100	150	200	Volts
Maximum average forward rectified current at T_C=125°C	$I_{(AV)}$	8.0				Amps
Peak forward surge current 10ms single half sine-wave superimposed at T_J=150°C	I_{FSM}	100.0				Amps
Maximum instantaneous forward voltage at: I_F=20A, T_J=25°C I_F=8A, T_J=150°C	V_F	1.3 0.8				Volts
Maximum DC reverse current at rated DC blocking voltage T_C=25°C T_C=100°C	I_R	10.0 500.0				µA
Maximum reverse recovery time (NOTE 1)	t_{rr}	25.0				ns
Typical junction capacitance (NOTE 2)	C_J	45.0				pF
Maximum thermal resistance (NOTE 3) (NOTE 4)	$R_{\theta JA}$ $R_{\theta JC}$	20.0 3.0				°C/W
Operating and storage temperature range	T_J, T_{STG}	-65 to +150				°C

NOTES:
(1) Reverse recovery test conditions: I_F=1A, V_R=30V, di/dt=100A/µs, I_{rr}=10%, I_{RM} for measurement of t_{rr}
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
(3) Thermal resistance from junction to ambient in free air; no heatsink
(4) Thermal resistance from junction to case mounted on heatsink

RATINGS AND CHARACTERISTIC CURVES BYW29-50 THRU BYW29-200

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

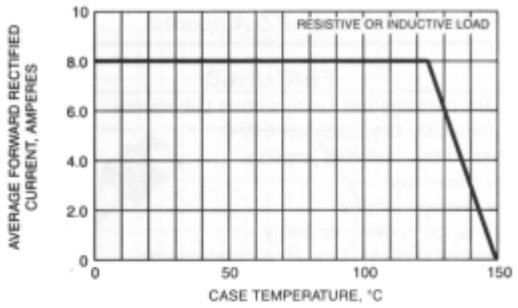


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

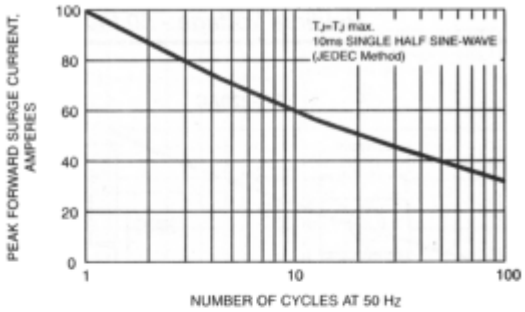


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

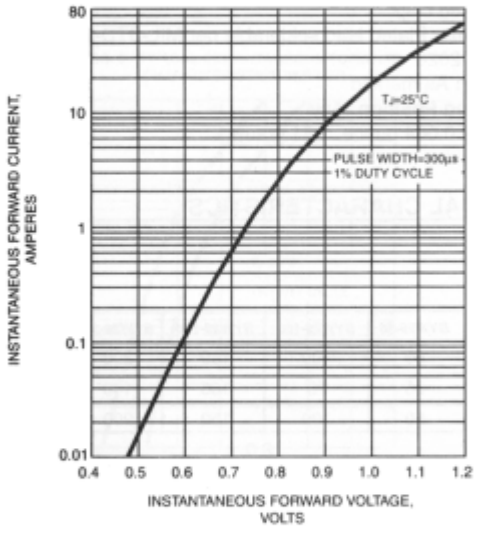


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

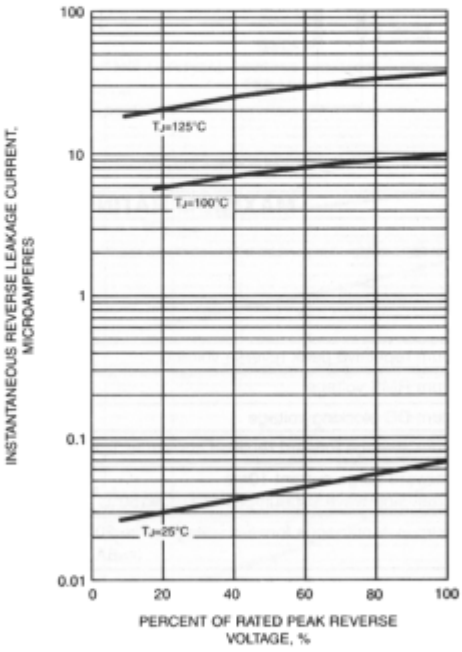


FIG. 5 - TYPICAL JUNCTION CAPACITANCE