BY500-50 THRU BY500-1000

SOFT RECOVERY FAST-SWITCHING PLASTIC RECTIFIERS

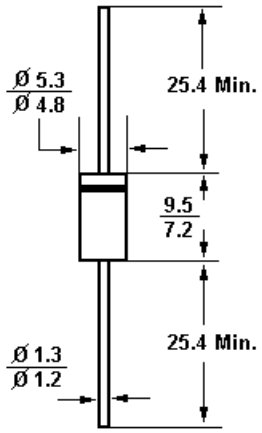
Reverse Voltage – 50 to 1000 V

Forward Current – 5 A

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Construction utilizes void-free molded plastic technique
- High surge current capability
- Especially designed for applications such as switch mode power supplies, inverters, converters, TV scanning, Ultrasonic-systems, speed controlled DC motors, low RF interference and free wheeling diode circuits

DO-201AD



Dimnsions in mm

Mechanical Data

- **Case:** Molded plastic, DO-201AD
- **Terminals:** Plated axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any

Absolute Maximum Ratings and Characteristics

Ratings at 25 °C unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20 %.

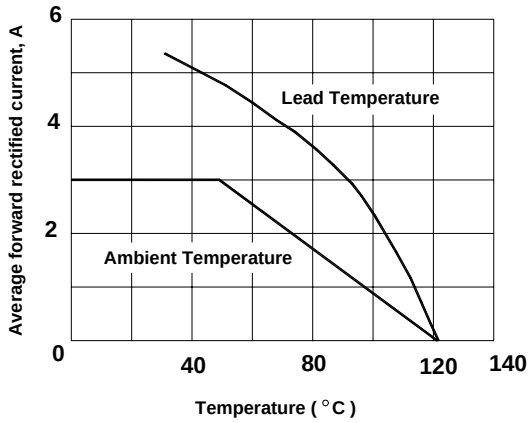
Parameter	Symbols	BY 500-50	BY 500-100	BY 500-200	BY 500-400	BY 500-600	BY 500-800	BY 500-1000	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Average Forward Rectified Current at T_L = 45 °C	$I_{F(AV)}$	5							A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	200							A
Maximum in Stantaneous Forward Voltage at 5 A	V_F	1.35							V
Maximum DC Reverse Current T_A = 25 °C at Rated DC Blocking Voltage T_A = 100 °C	I_R	10 1000							μA
Maximum Reverse Recovery Time [1]	T_{rr}	200							ns
Typical Junction Capacitance [2]	C_J	28							pF
Typical Thermal Resistance [3]	$R_{\theta JA}$	22							°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	- 50 to + 125							°C

[1] Reverse recovery test conditions: I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A

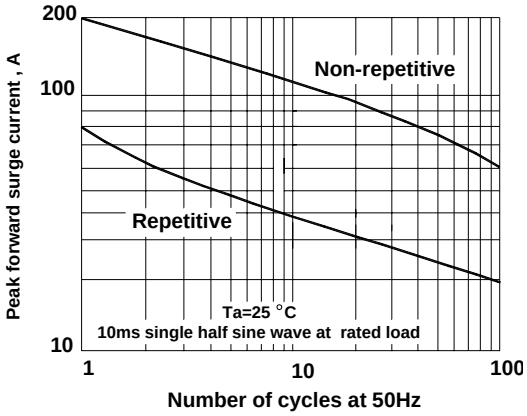
[2] Measured at 1 MH_Z and applied reverse voltage of 4 V

[3] Thermal resistance from junction to ambient and from junction to lead at 0.375"(9.5 mm) lead length P.C.B, Mounted with 0.8 x 0.8"(20 x 20 mm) copper pads.

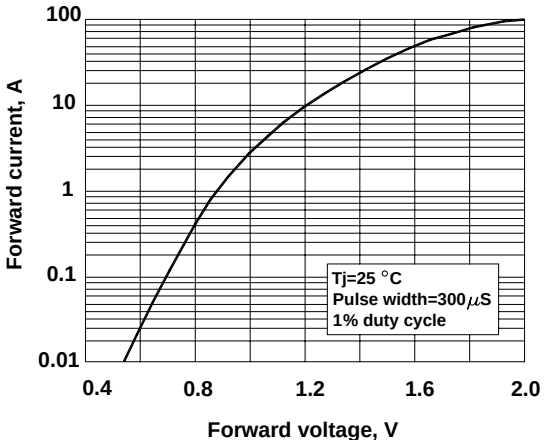
Forward current derating curve



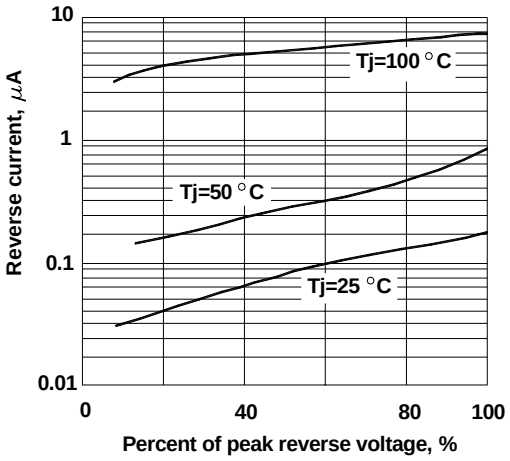
Maximum peak forward surge current



Typical Forward Characteristics



Typical Reverse Characteristics



Typical junction capacitance