

Pb Free Plating Product

# BY127 thru BY133



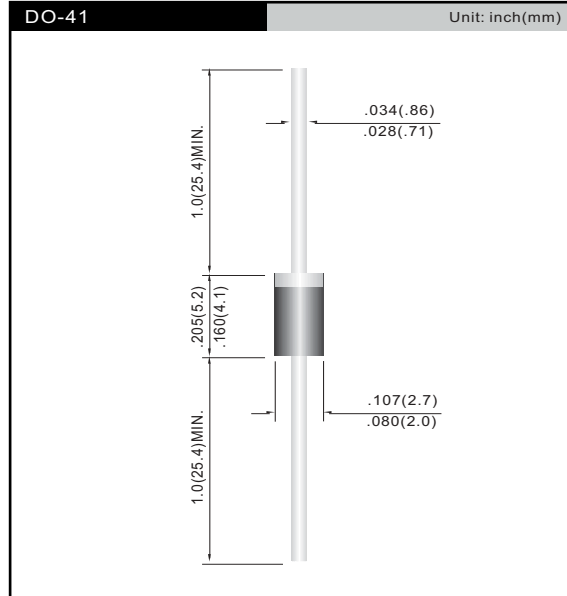
1.0 Ampere DO-41 Package High Voltage Silicon Diode

## Features

- Low forward voltage drop
- High current capability
- High surge current capability

## Mechanical Data

- Case: Molded plastic, DO-41
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202 method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

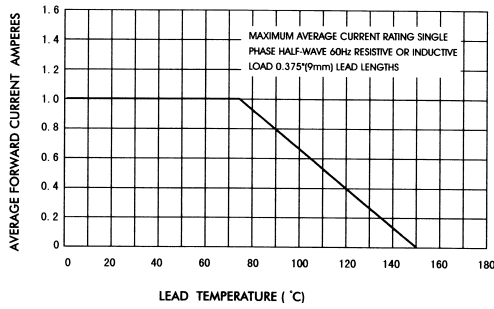
(Ratings at 25°C ambient temperature unless otherwise specified, Single phase, half wave 60Hz, resistive or inductive load. For capacitive load, derate by 20%)

	Symbols	BY127	BY133	EM513	EM516	Units
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	1250	1300	1600	1800	Volts
Maximum RMS voltage	V <sub>RMS</sub>	875	930	1120	1270	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	1250	1300	1600	1800	Volts
Maximum average forward rectified current 0.375"(9.5mm)lead length at T <sub>A</sub> =75°C	I <sub>(AV)</sub>	1.0				Amp
Peak forward surge current 8.3ms sing-wave superimposed on rated load (JEDEC method) T <sub>A</sub> =75°C	I <sub>FSM</sub>	30.0				Amps
Maximum instantaneous forward voltage at 1.0 A	V <sub>F</sub>	1.1				Volts
Maximum reverse current at rated DC blocking voltage	T <sub>A</sub> =25°C	5.0				μ A
	T <sub>A</sub> =100°C	200.0				
Typical thermal resistance(Note 2)	R <sub>θ JA</sub>	50.0				°C/W
	R <sub>θ JL</sub>	25.0				
Typical junction Capacitance(Note 1)	C <sub>J</sub>	15.0				pF
Operating and storage temperature range	T <sub>J</sub>	-50 to +150				°C
	T <sub>STG</sub>					

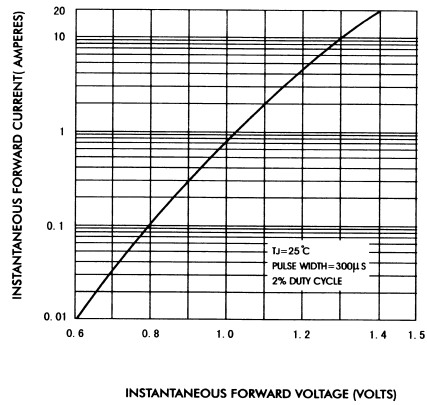
**Notes:** 1. Measured at 1MHz and applied reverse voltage of 4.0V DC  
 2. Thermal resistance from junction to ambient and from junction lead at 0.375"(9.5mm)lead length, P.C.B. Mounted

## RATINGS AND CHARACTERISTIC CURVES BY127 thru BY133

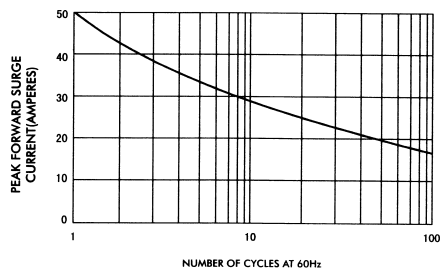
**FIG.1-FORWARD CURRENT DERATING CURVE**



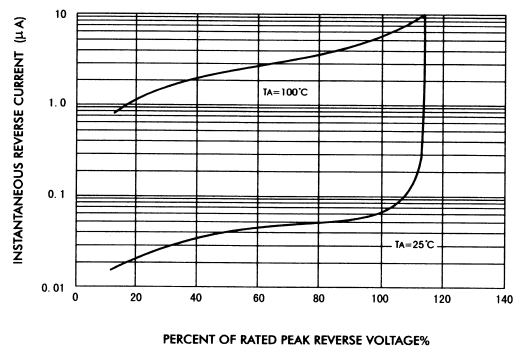
**FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4-TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**

