



**BY133,  
 EM513 thru EM518**

**1.0A Leaded Glass Passivated  
 Standard Rectifiers - 1300V-2000V**



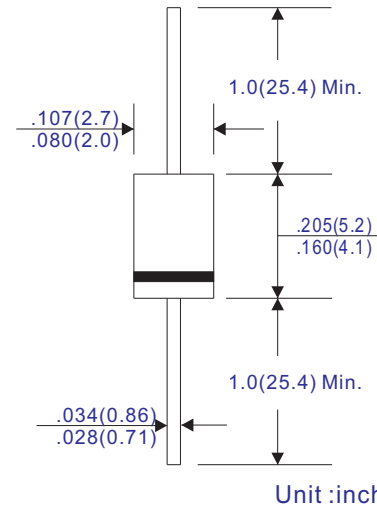
**FEATURES**

- Low drop down voltage
- High current capability
- Low reverse leakage
- High surge current capability
- Glass passivated chip junction
- Lead-free parts for green partner, meet RoHS requirements

**MECHANICAL DATA**

- Case: JEDEC DO-41 molded plastic
- Epoxy: UL94-V0 rated flame retardant
- Terminals: Solderable per MIL-STD-750 Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.008 ounces, 0.23 grams

**DO-41**



**MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified

	Symbols	BY133	EM513	EM516	EM518	Units
Maximum Recurrent Peak Reverse Voltage	VRRM	1300	1600	1800	2000	Volts
Maximum RMS Voltage	VRMS	910	1120	1260	1400	Volts
Maximum DC Blocking Voltage	VDC	1300	1600	1800	2000	Volts
Maximum Average Forward Rectified Current, See Figure 1	I(AV)		1.0 0.75			Amps
Repetitive Peak Forward Current (f>15Hz), Note 1	IFRM		10.0			Amps
Peak Forward Surge Current 8.3mS single half sine-wave superimposed on rated load (JEDEC Method) TA=50°C	IFSM		50.0			Amps
Maximum Instantaneous Forward Voltage at 1.0A	VF		1.1			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	IR		5.0 200.0			µA
Rating for Fusing, t<10ms, TA=25°C	I <sup>2</sup> t		12.5			A <sup>2</sup> s
Typical Junction Capacitance (Note 1)	CJ		15			pF
Typical Thermal Resistance (Note 2)	RθJA		45			°C/W
Operating Junction Temperature Range	TJ		-65 ~ +150			°C
Storage Temperature Range	TSTG		-65 ~ +150			°C

Note 1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts  
 2. Thermal resistance from junction to ambient

