

# BY127, BY133, EM513, EM516, EM518

High Voltage Glass Passivated Junction Rectifiers Reverse Voltage 1250 to 2000 Volts Forward Current 1.0 Ampere

#### **Features**

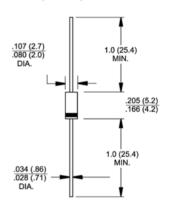
- ◆ Low forward voltage drop
- ♦ High current capability
- High reliability
- ♦ High surge current capability
- ◆ Repetitive peak reverse voltage: 1250-2000V
- ◆ Plastic material has UL classification 94V-0



#### DO-204AL (DO-41)

#### **Mechanical Data**

- ◆ Plastic case: DO-204AL (DO-41)
- ◆ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ◆ Polarity: Color band denotes cathode end
- ◆ High temperature soldering guaranteed: 250°C/10 seconds .375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ◆ Weight: 0.012 ounce, 0.33 gram



## **Maximum Ratings and Electrical Characteristics**

Dimensions in inches and (millimeters)

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

To capacitive load, defate current by 2070							
Parameter	Symbols	BY127	BY133	EM513	EM516	EM518	Units
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	1250	1300	1600	1800	2000	Volts
Maximum RMS voltage	V <sub>RMS</sub>	875	910	1120	1260	1400	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	1250	1300	1600	1800	2000	Volts
Max. average forward rectified current, R-load T <sub>A</sub> =75°C <sup>1)</sup>	I <sub>F(AV)</sub>	1.0					Amp
Max. average forward rectified current, R-load T <sub>A</sub> =100°C <sup>1)</sup>	I <sub>F(AV)</sub>	0.75					Amp
Repetitive peak forward current 1) (f>15Hz)	I <sub>FRM</sub>	10					Amps
Peak forward surge current, 50 Hz half sine-wave at T <sub>A</sub> =25°C	I <sub>FSM</sub>	50.0					Amps
Rating for fusing, t<10 ms T <sub>A</sub> =25°C	i²t	12.5					A²s
Maximum forward voltage at 1.0A T <sub>J</sub> =25°C	V <sub>F</sub>	1.1					Volts
Leakage current $T_j$ =25°C $V_R$ = $V_{RRM}$ $T_j$ =100°C $V_R$ = $V_{RRM}$	I <sub>R</sub>	5 200					uA
Thermal resistance junction to ambient air	R <sub>eJA</sub>	45.0					K/W 1)
Operating junction temperature	T,	-50 to +150					°C
Storage temperature range	T <sub>STG</sub>	-50 to +150					∘C

Notes: 1. Valid, if leads are kept at ambient temperature at a distance of 10 mm from case

### **RATINGS AND CHARACTERISTIC CURVES**

