



BY127, BY133, EM513, EM516, EM518

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

Features

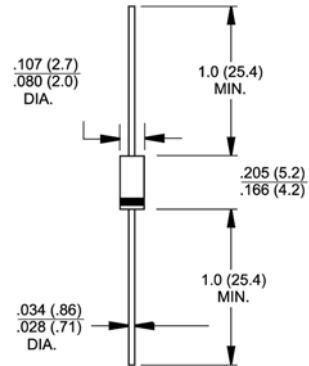
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ High reliability
- ◆ High surge current capability
- ◆ Repetitive peak reverse voltage: 1250-2000V
- ◆ Plastic material has UL classification 94V-0



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

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%

Dimensions in inches and (millimeters)

Parameter	Symbols	BY127	BY133	EM513	EM516	EM518	Units
Maximum repetitive peak reverse voltage	V_{RRM}	1250	1300	1600	1800	2000	Volts
Maximum RMS voltage	V_{RMS}	875	910	1120	1260	1400	Volts
Maximum DC blocking voltage	V_{DC}	1250	1300	1600	1800	2000	Volts
Max. average forward rectified current, R-load $T_A=75^\circ\text{C}^{1)}$	$I_{F(AV)}$	1.0					Amp
Max. average forward rectified current, R-load $T_A=100^\circ\text{C}^{1)}$	$I_{F(AV)}$	0.75					Amp
Repetitive peak forward current $^{1)}$ ($f>15\text{Hz}$)	I_{FRM}	10					Amps
Peak forward surge current, 50 Hz half sine-wave at $T_A=25^\circ\text{C}$	I_{FSM}	50.0					Amps
Rating for fusing, $t<10\text{ ms } T_A=25^\circ\text{C}$	i^2t	12.5					A^2s
Maximum forward voltage at 1.0A $T_J=25^\circ\text{C}$	V_F	1.1					Volts
Leakage current $T_J=25^\circ\text{C } V_R=V_{RRM}$ $T_J=100^\circ\text{C } V_R=V_{RRM}$	I_R	5 200					μA
Thermal resistance junction to ambient air	$R_{\theta JA}$	45.0					$\text{K/W}^{1)}$
Operating junction temperature	T_J	-50 to +150					$^\circ\text{C}$
Storage temperature range	T_{STG}	-50 to +150					$^\circ\text{C}$

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

RATINGS AND CHARACTERISTIC CURVES

