

### Features

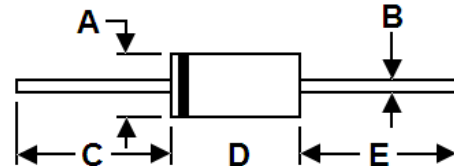
- \* Low Forward Voltage Drop
- \* High Current Capability
- \* High Reliability
- \* High Surge Current Capability



**RoHS**  
COMPLIANT

### Package Outline Dimensions

DO-41:



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.0	2.7	0.078	0.107
B	0.7	0.9	0.027	0.035
C	25.4	-	1.0	-
D	4.2	5.2	0.165	0.205
E	25.4	-	1.0	-

### Mechanical Data

- \* Case: Molded plastic
- \* 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

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

Type Number	Symbol	BY127	BY133	EM513	EM516	EM520	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	1250	1300	1600	1800	2000	V
Maximum RMS Voltage	$V_{RMS}$	875	910	1120	1260	1400	V
Maximum D.C Blocking Voltage	$V_{DC}$	1250	1300	1600	1800	2000	V
Maximum Average Forward Rectified Current @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1.0					A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30					A
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	1.1					V
Maximum D.C Reverse Current @ $T_J=25^\circ\text{C}$ at Rated D.C Blocking Voltage @ $T_J=100^\circ\text{C}$	$I_R$	5.0 100					$\mu\text{A}$
Typical Junction Capacitance(Note1)	$C_J$	15					pF
Typical Thermal Resistance(Note2)	$R_{\theta JA}$	50					$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	-55 to +150					$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150					$^\circ\text{C}$

Note:1、 Measured at 1MHz and Applied Reverse Voltage of 4.0V D.C.

2、 Thermal Resistance From Junction to Ambient 0.375"(9.5mm) Lead Length, P.C.B mounted

Ratings and Characteristic Curves

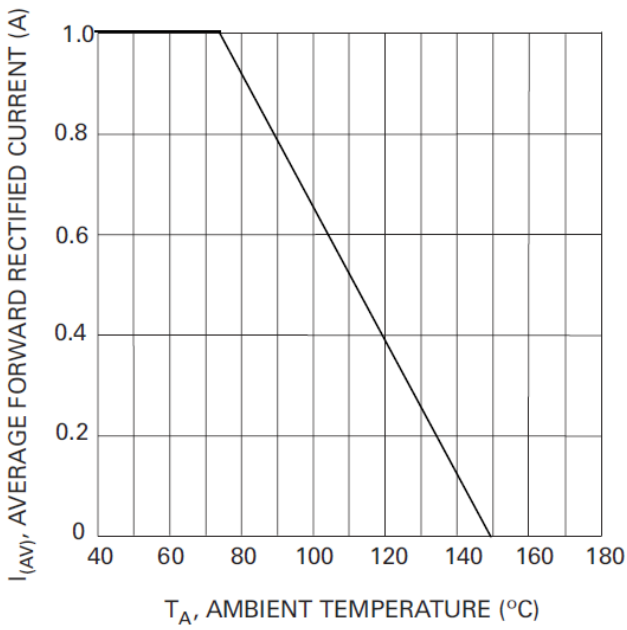


Fig. 1 Forward Current Derating Curve

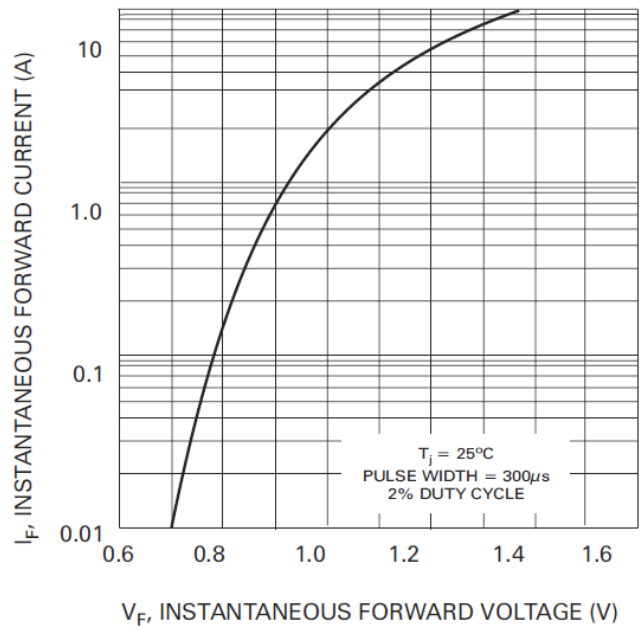


Fig. 2 Typical Forward Characteristics

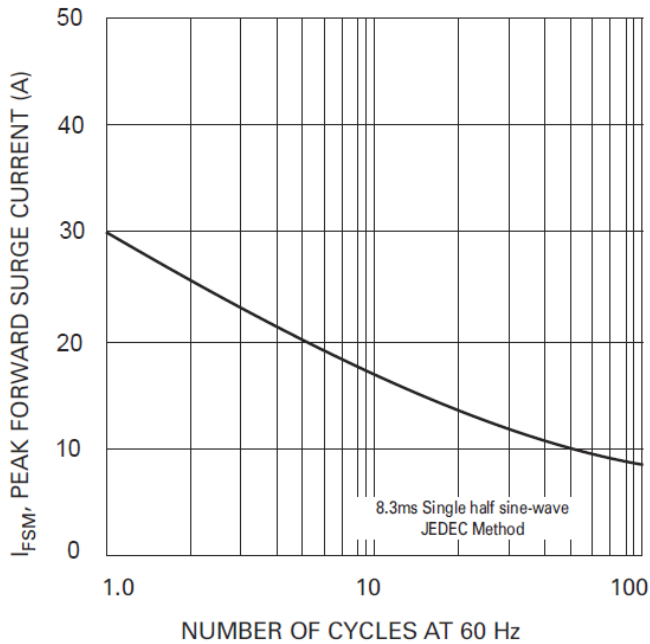


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

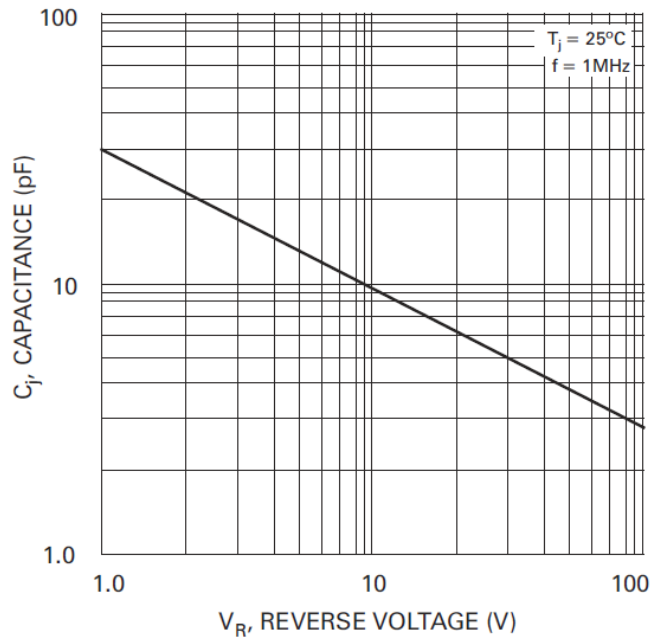


Fig. 4 Typical Junction Capacitance



## BY127,BY133,EM513,EM516,EM520 Silicon Rectifiers

### Ordering Information

Part No.	Package	Packing
BY127/BY133/EM513/EM516/EM520	DO-41	3K/AMMO box
BY127/BY133/EM513/EM516/EM520	DO-41	5K/AMMO box
BY127/BY133/EM513/EM516/EM520	DO-41	5K/13" Paper reel
BY127/BY133/EM513/EM516/EM520	DO-41	1K/Bulk packing