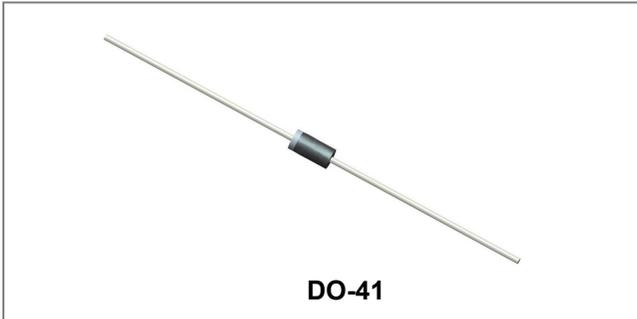


BY133 1.0 SILICON RECTIFIER



Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: molded plastic
- Terminals: Plated leads, solderable per MIL-STD-202, Method 208
- Polarity: Cathode band
- Mounting Position: Any
- Weight: 0.34 grams (approx)

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Type Number	Symbol	BY133	Units
Peak Repetitive Reverse Voltage	V_{RRM}	1300	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	V_{RMS}	910	V
Average forward rectified output current @ $T_A = 75^\circ\text{C}$	I_o	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30	A
Forward Voltage @ $I_F = 1.0\text{A}$	V_{FM}	1.0	V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$	I_{RM}	5.0	μA
At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$		50	
Typical Junction Capacitance (Note 2)	C_J	15	pF
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	50	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-65 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^\circ\text{C}$

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Ratings and Characteristics Curves

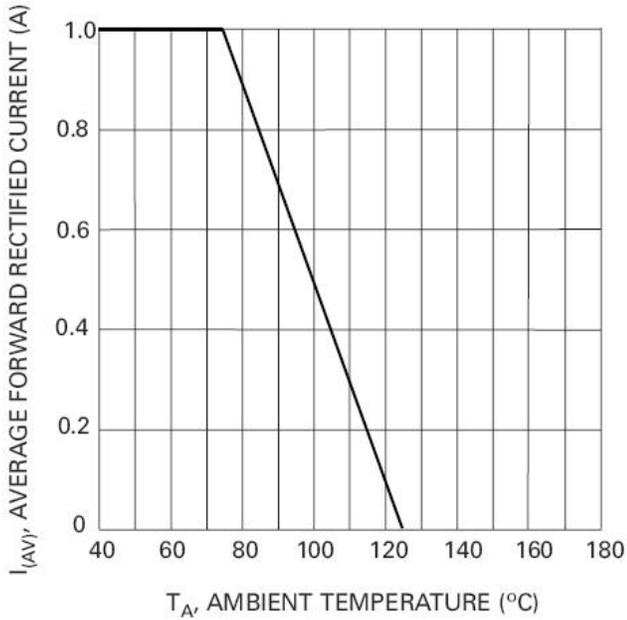


Fig. 1 Forward Current Derating Curve

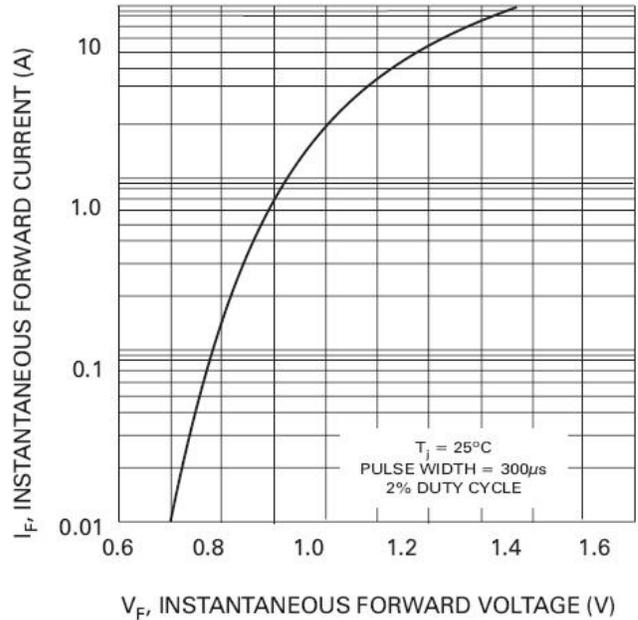


Fig. 2 Typical Forward Characteristics

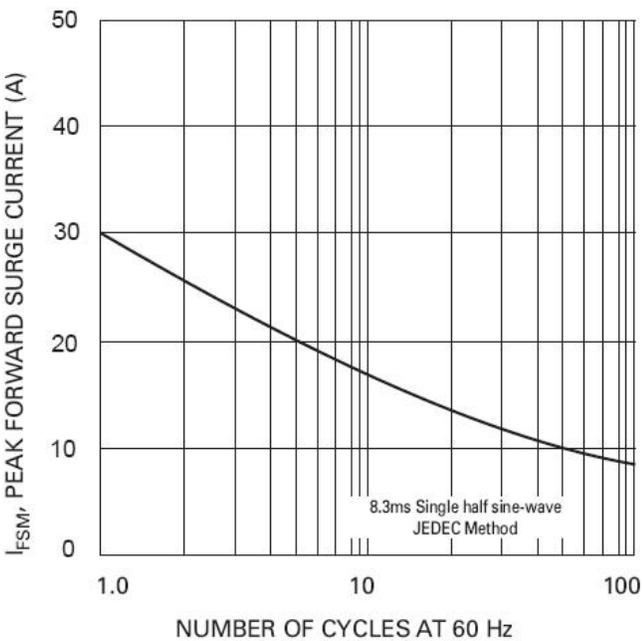


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

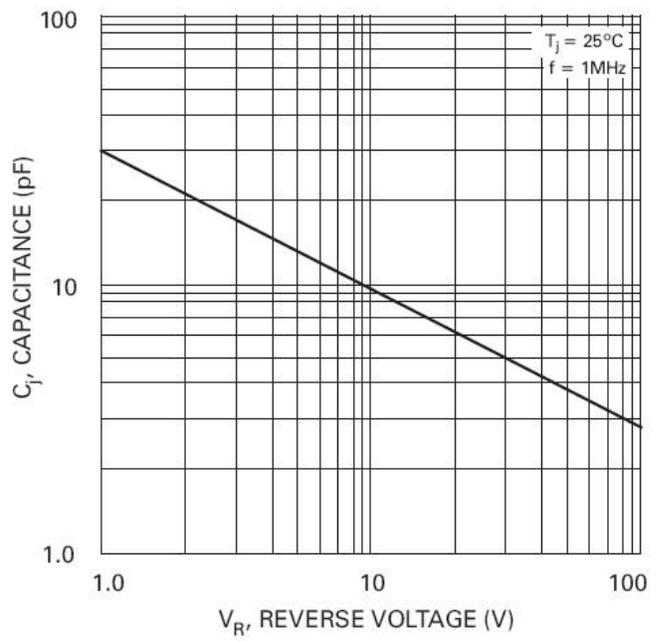
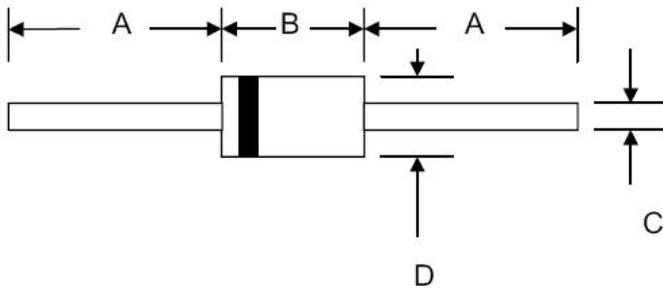


Fig. 4 Typical Junction Capacitance

Mechanical Dimensions DO-41


SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	4.06	5.21	0.160	0.205
C	0.71	0.864	0.028	0.034
D	2.00	2.72	0.079	0.107

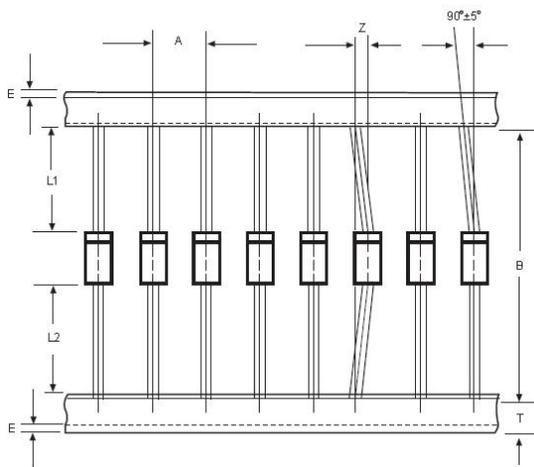
Ordering Information

Device	Package	Shipping
BY133	DO-41 (Pb-Free)	5000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram


BY133 = Part Name

Carrier Tape Specification DO-41


SYMBOL	Millimeters	
	Min.	Max.
A	4.50	5.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

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