

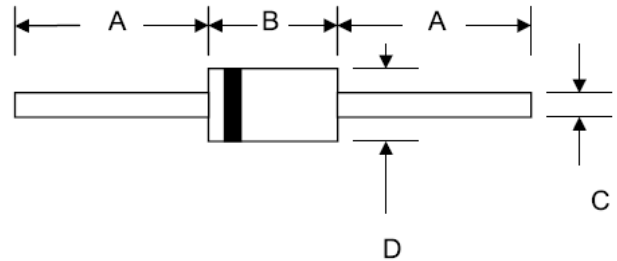


**THE DATASHEET OF  
BY133TA**



**Technical Data**  
**Data Sheet N0551, Rev. A**  
**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



**Mechanical Data**

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.35 grams (approx.)
- Mounting Position: Any
- Marking: Part Name,SSG and Date Code

DO-41				
Dim	Min	Max	Min	Max
A	25.4	—	1.000	—
B	4.06	5.21	0.159	0.205
C	0.71	0.864	0.028	0.034
D	2.00	2.72	0.079	0.107
	In mm		In inch	

**Marking Diagram:**



BY133 = Part Name

**Cautions:** Molding resin  
Epoxy resin UL:94V-0

**Ordering Information**

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

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.



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**Maximum Ratings and Electrical Characteristics** @T<sub>A</sub>=25°C unless otherwise specified

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

Characteristic	Symbol	BY133	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	1300	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	910	V
Average Rectified Output Current (Note 1) @T <sub>A</sub> = 75°C	I <sub>O</sub>	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30	A
Forward Voltage @I <sub>F</sub> = 1.0A	V <sub>FM</sub>	1.0	V
Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C	I <sub>RM</sub>	5.0 50	μA
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	15	pF
Typical Thermal Resistance Junction to Ambient (Note 1)	R <sub>θJA</sub>	50	K/W
Operating Temperature Range	T <sub>j</sub>	-65 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150	°C

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case  
2. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0V D.C.

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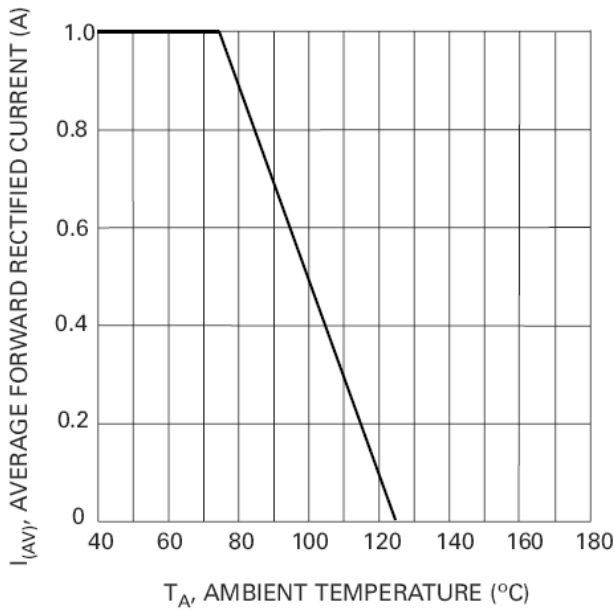


Fig. 1 Forward Current Derating Curve

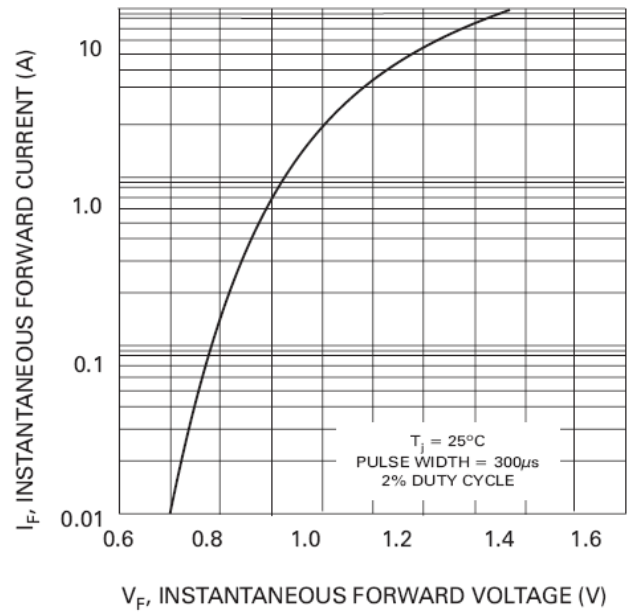


Fig. 2 Typical Forward Characteristics

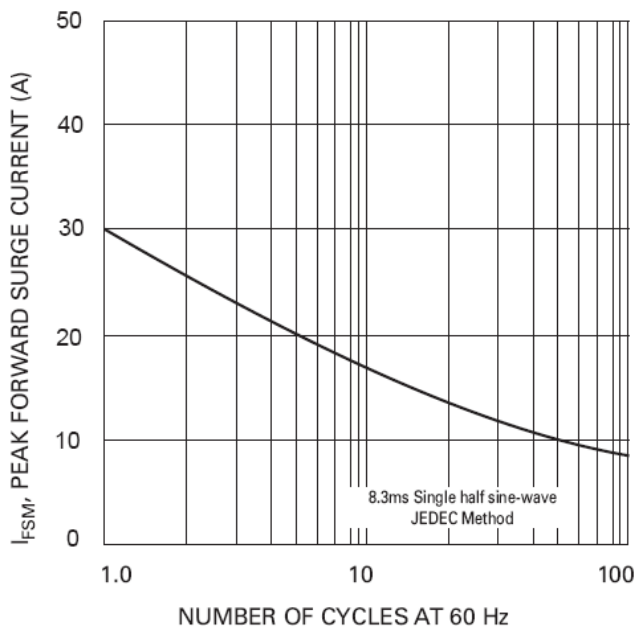


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

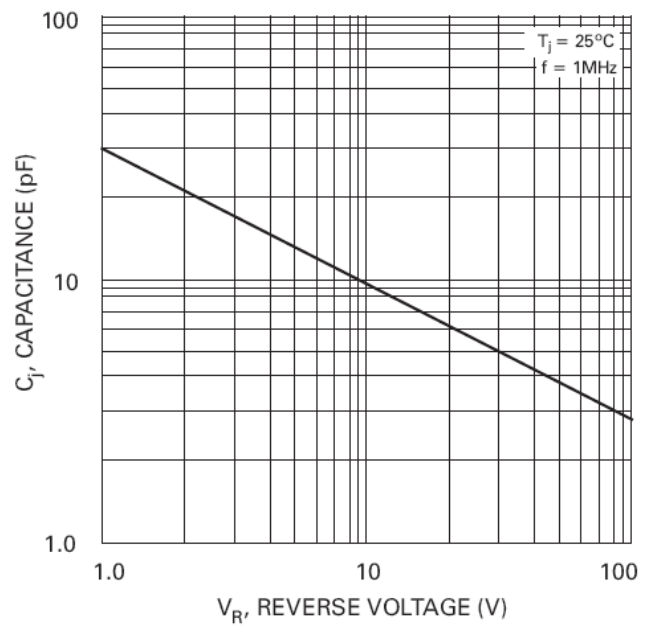


Fig. 4 Typical Junction Capacitance





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