

SMD General Rectifier Diode

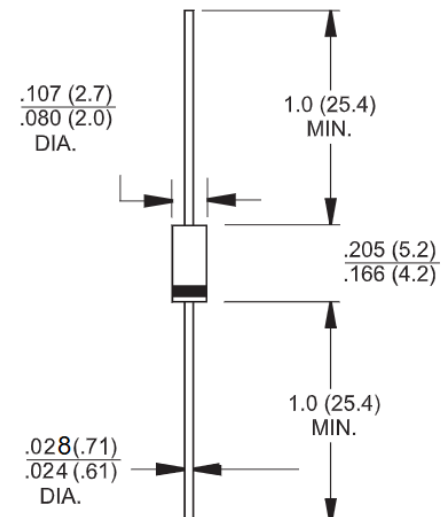
Primary characteristics		
Parameter	Value	Unit
Maximum Repetitive Peak Reverse Voltage	50 ~ 1300	V
Maximum Average Forward Rectified Current	1.0	A

Features

- High efficiency, Low VF
- High current capability
- High reliability
- High surge current capability
- Low power loss

Mechanical Data

- Cases: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- High temperature soldering guaranteed:
260 °C/10 seconds/.375", (9.5mm)
Lead lengths at 5 lbs., (2.3kg) tension

Case dimensions
 Diagram showing the dimensions of the DO-41 package. The top lead diameter is .107 (2.7) / .080 (2.0) DIA. The top lead length is 1.0 (25.4) MIN. The body width is .205 (5.2) / .166 (4.2). The bottom lead diameter is .028 (.71) / .024 (.61) DIA. The bottom lead length is 1.0 (25.4) MIN.
DO-41
Dimensions in inches and (millimeters)

Absolute maximum ratings and general electrical characteristics

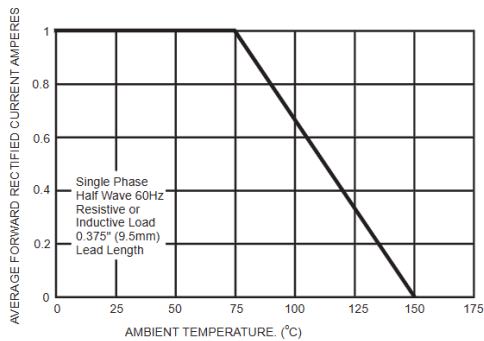
(Rating at 25°C ambient temperature unless otherwise specified.)

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

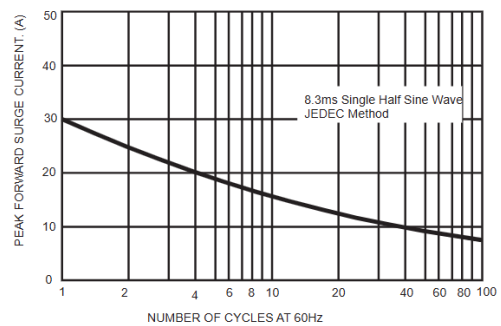
Parameter		Symbol	Value							Unit	
			1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007		BY133
Maximum recurrent peak reverse voltage		V _{RRM}	50	100	200	400	600	800	1000	1300	V
Maximum RMS voltage		V _{RMS}	35	70	140	280	420	560	700	910	
Maximum DC blocking voltage		V _{DC}	50	100	200	400	600	800	1000	1300	
Maximum average forward rectified current .375" (9.5mm) lead length @T _A =75°C		I _(AV)	1.0							A	
Peak forward surge current 8.3mS single half sine wave superimposed on rated load (JEDEC method)		I _{FSM}	30								
Maximum instantaneous forward voltage @1.0A		V _F	1.0							V	
Maximum DC reverse current at rated DC blocking voltage	T _a =25°C	I _R	5.0							μA	
	T _a =125°C		50								

Max. full load reverse current, full cycle avg. .375" (9.5mm) lead length @T _A =75°C	HT _{IR}	30	μA
Typical junction capacitance	C _j	10	pF
Typical thermal resistance ¹⁾	R _{θJA}	65	°C/W
Operating junction and storage temperature range ²⁾	T _j , T _{STG}	-65 ~ 150	°C
Notes: 1) Measured at 1MHz and applied reverse voltage of 4.0 VDC 2) Mount on Cu-Pad size 5x5mm on PCB			

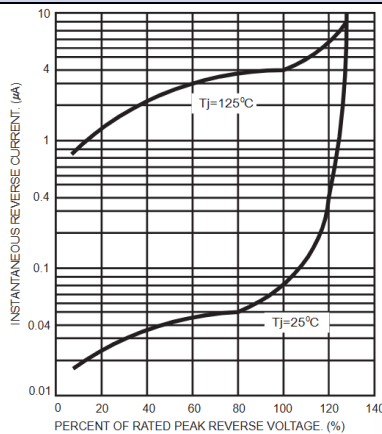
Maximum forward current derating curve



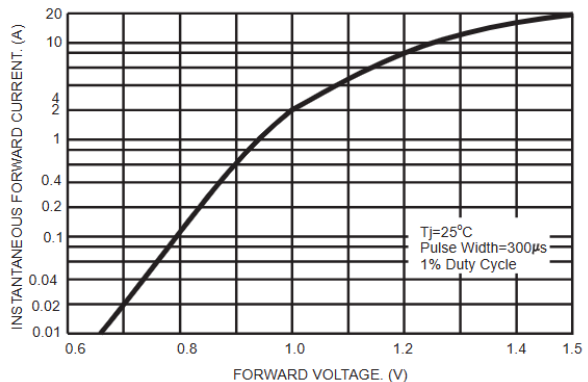
Maximum non-repetitive forward surge current



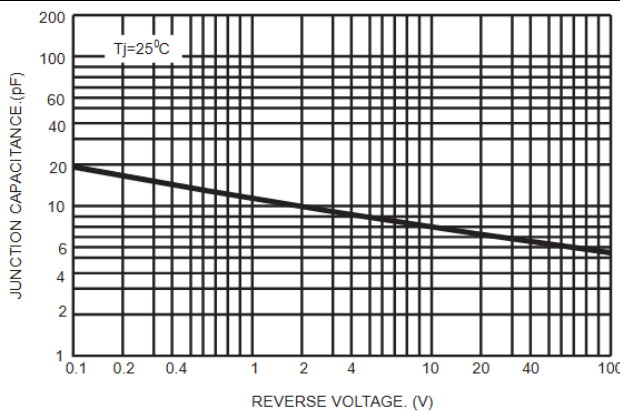
Typical reverse characteristics



Typical forward characteristics



Typical junction capacitance



Ordering information			
Part Number	Package	Shipping Quantity	Dimensions
1N4001 ~ 1N4007, BY133	DO-41	5000 – Ammo/ 50000 – Carton	---

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