



SILICON RECTIFIER DIODES

BY133

PRV : 50 - 1300 Volts

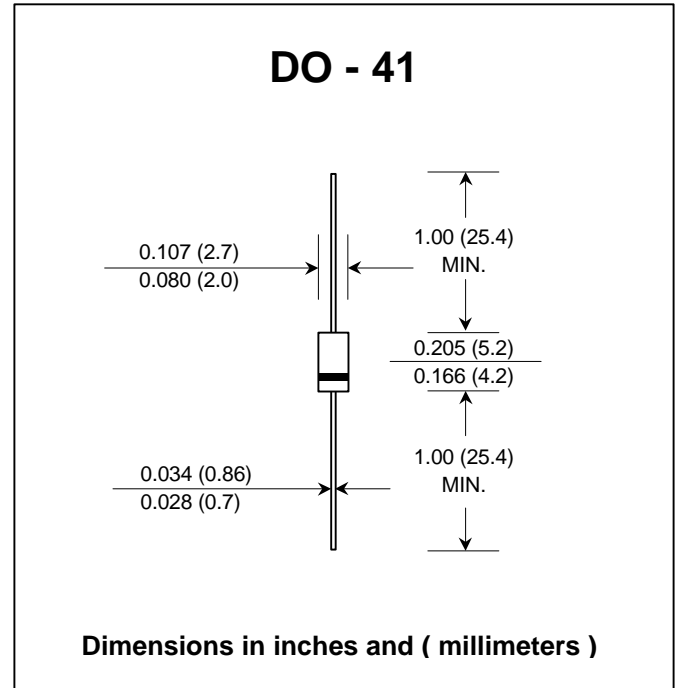
Io : 1.0 Ampere

FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Pb / RoHS Free

MECHANICAL DATA :

- \* Case : DO-41 Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.34 gram



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%.

RATING	SYMBOL	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	BY133	UNIT
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	1300	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	1000	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	1300	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 75 °C	I <sub>F(AV)</sub>	1.0								A
Maximum Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30								A
Maximum Forward Voltage at I <sub>F</sub> = 1.0 Amp.	V <sub>F</sub>	1.1								V
Maximum DC Reverse Current Ta = 25 °C at rated DC Blocking Voltage Ta = 100 °C	I <sub>R</sub>	5.0								μA
	I <sub>R(H)</sub>	50								μA
Typical Reverse Recovery Time (I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 A, I <sub>rr</sub> = 0.25 A.)	T <sub>rr</sub>	2.0								μs
Typical Junction Capacitance (Note1)	C <sub>J</sub>	15								pF
Typical Thermal Resistance (Note2)	RθJA	26								°C/W
Junction Temperature Range	T <sub>J</sub>	- 65 to + 175								°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 175								°C

Notes : (1) Measured at 1.0 MHz and applied reverse voltage of 4.0VDC  
(2) Thermal resistance from Junction to Ambient at 0.375" (9.5mm) Lead Lengths, P.C. Board Mounted.



RATING AND CHARACTERISTIC CURVES ( 1N4001 - BY133 )

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

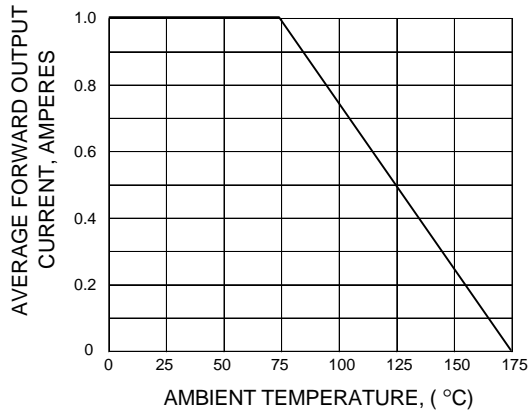


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

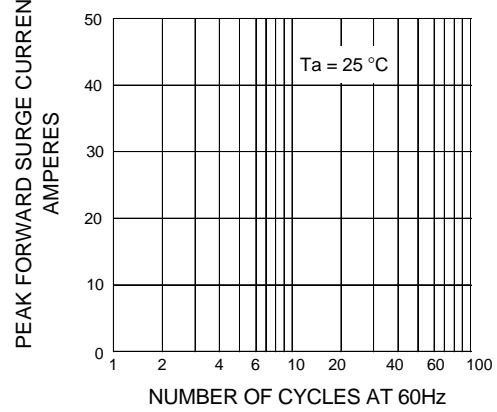


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

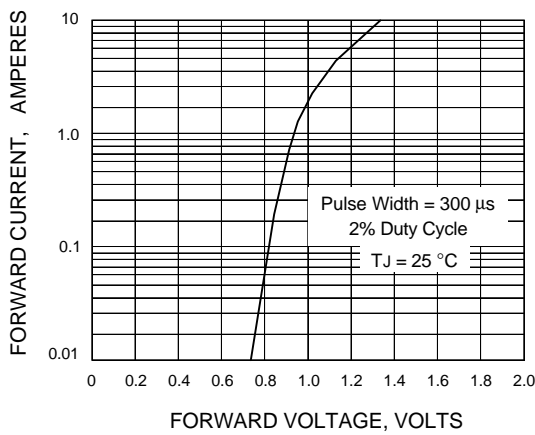
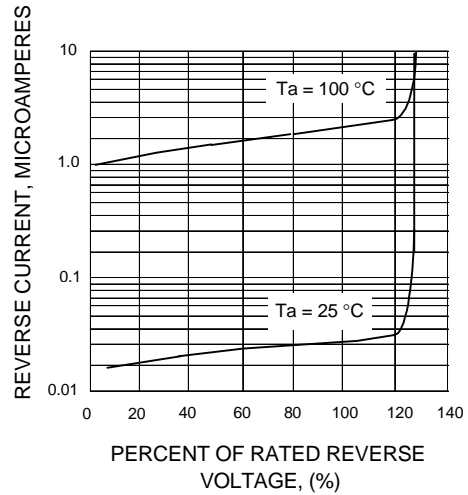


FIG.4 - TYPICAL REVERSE CHARACTERISTICS



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