

1N4001 - 1N4007 BY133

PRV : 50 - 1300 Volts
Io : 1.0 Ampere

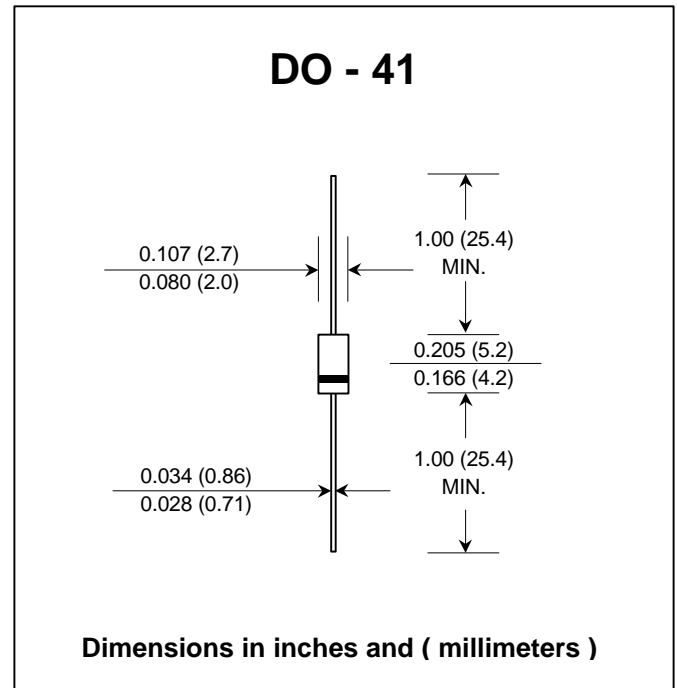
FEATURES :

- * 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

SILICON RECTIFIER DIODES



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_{RRM}	50	100	200	400	600	800	1000	1300	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	1000	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	1300	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length $T_a = 75\text{ }^\circ\text{C}$	$I_{F(AV)}$	1.0								A
Maximum Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	I_{FSM}	30								A
Maximum Forward Voltage at $I_F = 1.0\text{ Amp.}$	V_F	1.1								V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at rated DC Blocking Voltage $T_a = 100\text{ }^\circ\text{C}$	I_R	5.0								μA
	$I_{R(H)}$	50								μA
Typical Reverse Recovery Time ($I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{rr} = 0.25\text{ A.}$)	T_{rr}	2.0								μs
Typical Junction Capacitance (Note1)	C_J	15								pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}$	26								$^\circ\text{C/W}$
Junction Temperature Range	T_J	- 65 to + 175								$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 65 to + 175								$^\circ\text{C}$

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

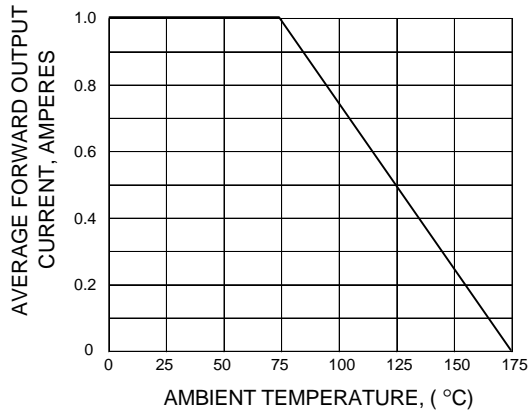


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

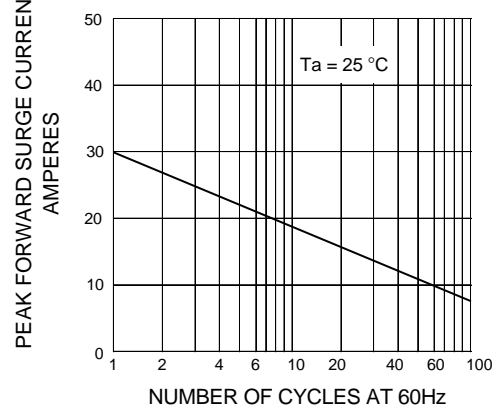


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

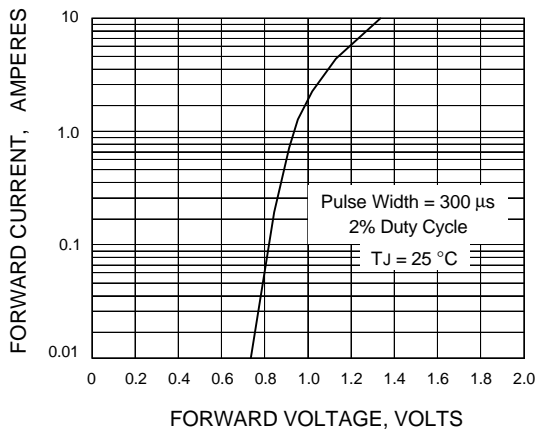


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

