



DO-41 Encapsulate General Purpose Rectifier

1N4001-1N4007 General Purpose Rectifier

Features

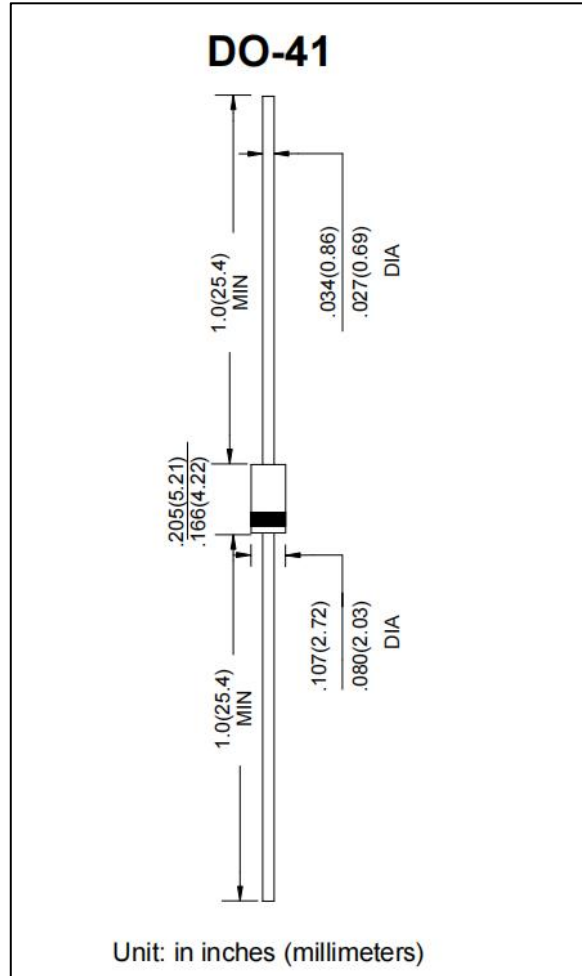
- I_o 1A.
- V_{RRM} 50V-1000V.
- Low reverse leakage
- High surge current capability
- AEC-Q101 Qualified.

Application

- Rectifier.

Marking

- 1N40XX
XX:From 01 To 07



ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	1N40							Unit
		01	02	03	04	05	06	07	
Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Average Forward Current 60Hz Half-sine wave, Resistance load, $T_a=50^\circ\text{C}$	$I_{F(AV)}$	1							A
Non-repetitive Peak Forward Surge Current 60Hz Half-sine wave , 1 cycle , $T_a=25^\circ\text{C}$	I_{FSM}	30							A
Junction Temperature	T_J	-55 ~ +125							$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150							$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition		Max	Unit
Peak Forward voltage	V_{FM}	$I_{FM}=1\text{A}$		1.1	V
Peak Reverse Current	I_{RRM1}	$V_{RM}=V_{RRM}$	$T_a=25^{\circ}\text{C}$	5	μA
	I_{RRM2}		$T_a=125^{\circ}\text{C}$	50	μA
Thermal Resistance (Typical)	$R_{\theta J-A}$	Between junction and ambient		55	$^{\circ}\text{C}/\text{W}$
	$R_{\theta J-L}$	Between junction and lead		25	$^{\circ}\text{C}/\text{W}$

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

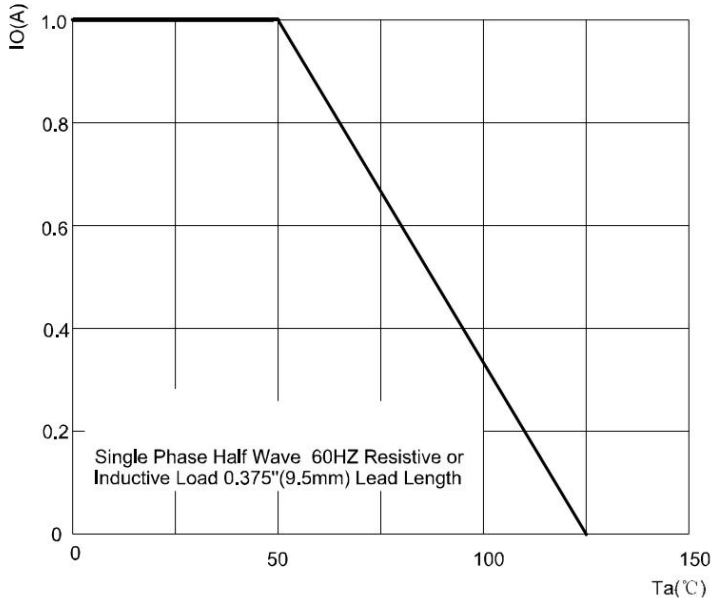


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

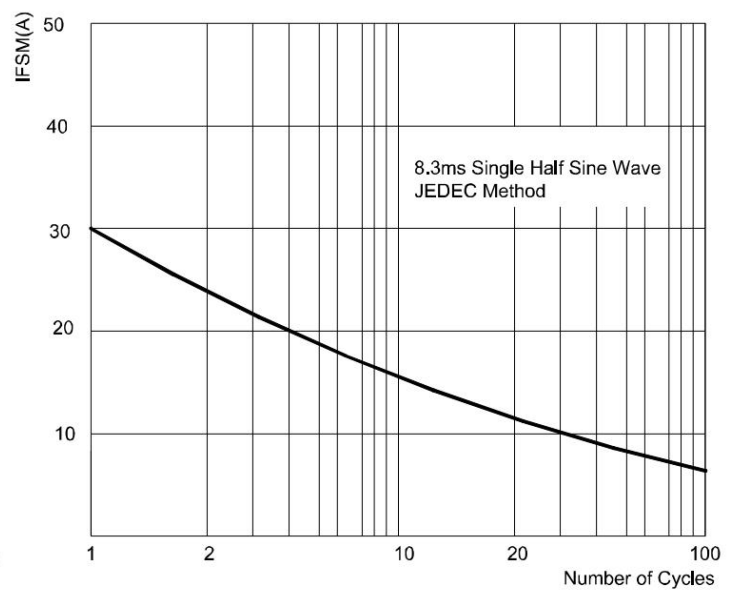


FIG.3: TYPICAL FORWARD CHARACTERISTICS

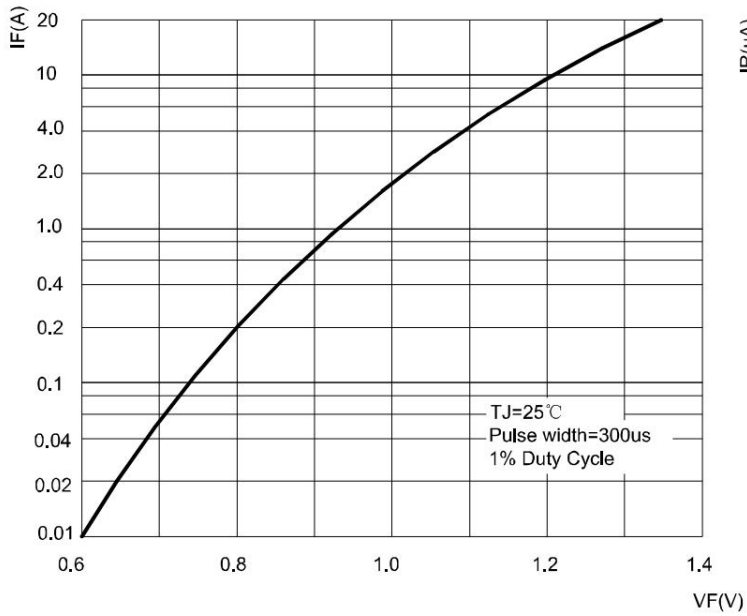
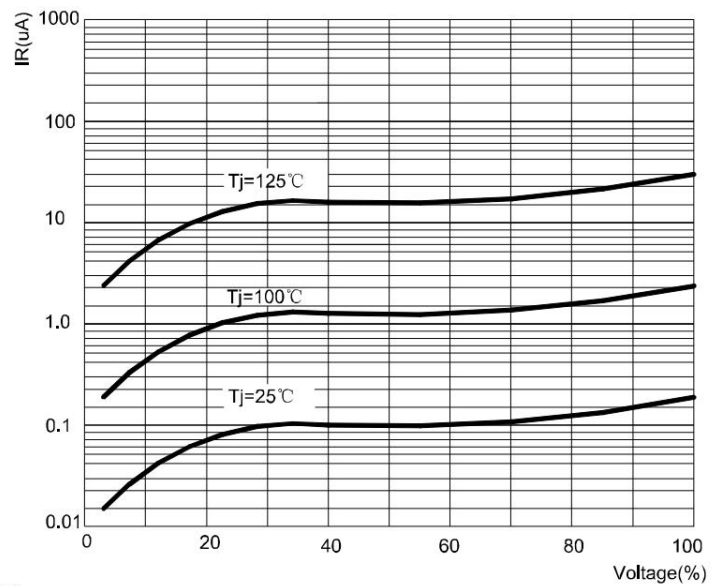


FIG.4: TYPICAL REVERSE CHARACTERISTICS



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Date of change	Rev #	revise content
2023/09/01	A/0	/