

UF4001 THRU UF4007



Ultra Fast Recovery Rectifiers

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Ampere

RoHS Device

Halogen Free

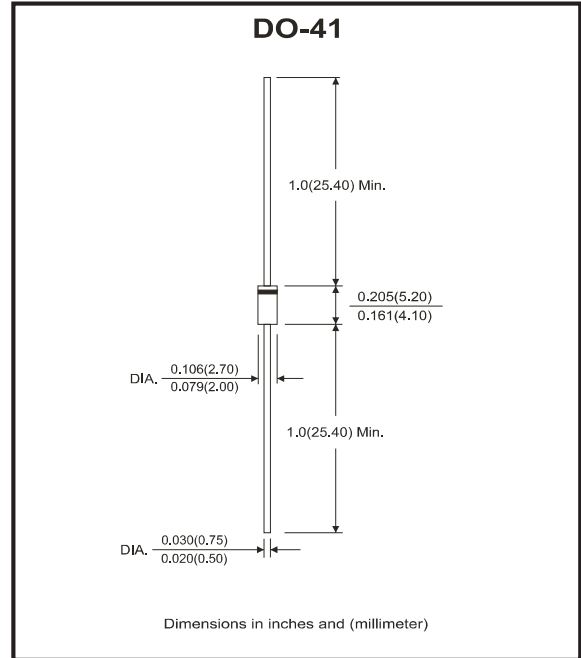


Features

- Diffused junction.
- Ultra fast switching for high efficiency.
- Low reverse leakage current.
- Low forward voltage drop.
- High current capability.

Mechanical data

- Case: JEDEC DO-41 molded plastic.
- Polarity: Color band denotes cathode.
- Mounting position: Any



Maximum Ratings and Electrical Characteristics

Ratings 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	UF4-Series							Unit
		4001	4002	4003	4004	4005	4006	4007	
Maximum recurrent 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
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current @ $T_A=75^\circ\text{C}$	$I_{(AV)}$	1							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							A
Peak forward voltage at 1.0A DC	V_F	1.0	1.3		1.7			V	
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_J=25^\circ\text{C}$ 5 $T_J=100^\circ\text{C}$ 100							μA
Maximum reverse recovery time (Note 1)	t_{rr}	50				75			nS
Typical junction capacitance (Note 2)	C_J	20				10			pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	25							$^\circ\text{C/W}$
Operating temperature range	T_J	-55 to +150							$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150							$^\circ\text{C}$

- Notes: 1. Measured with $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance junction to ambient.
4. The typical data above is for reference only.

Company reserves the right to improve product design, functions and reliability without notice.

Rev:1.0

Rating and Characteristic Curves

Fig.1 - Typical Forward Current Derating Curve

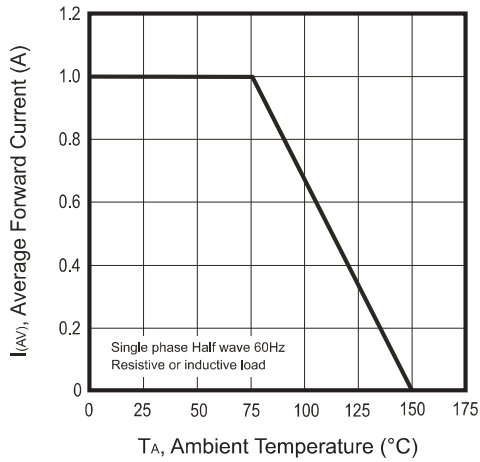


Fig.2 - Max. Non-Repetitive Surge Current

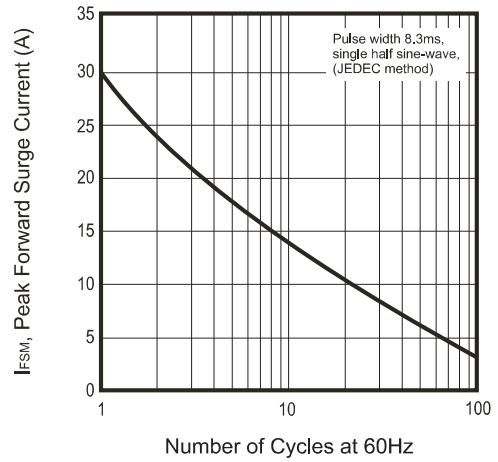


Fig.3 - Typical Forward Characteristics

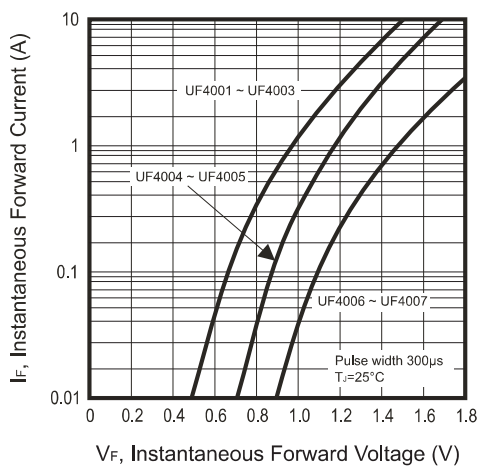
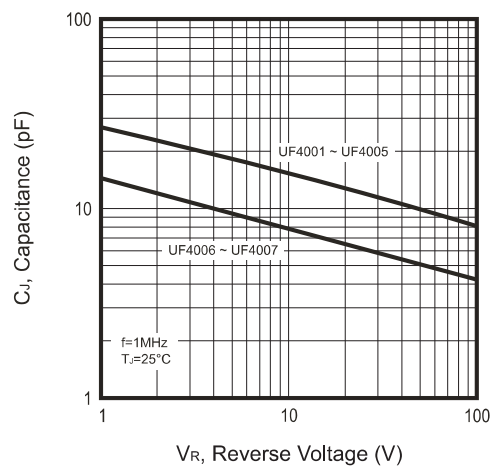


Fig.4 - Typical Junction Capacitance



Marking Code

Part Number	Marking Code
UF4001	UF4001
UF4002	UF4002
UF4003	UF4003
UF4004	UF4004
UF4005	UF4005
UF4006	UF4006
UF4007	UF4007

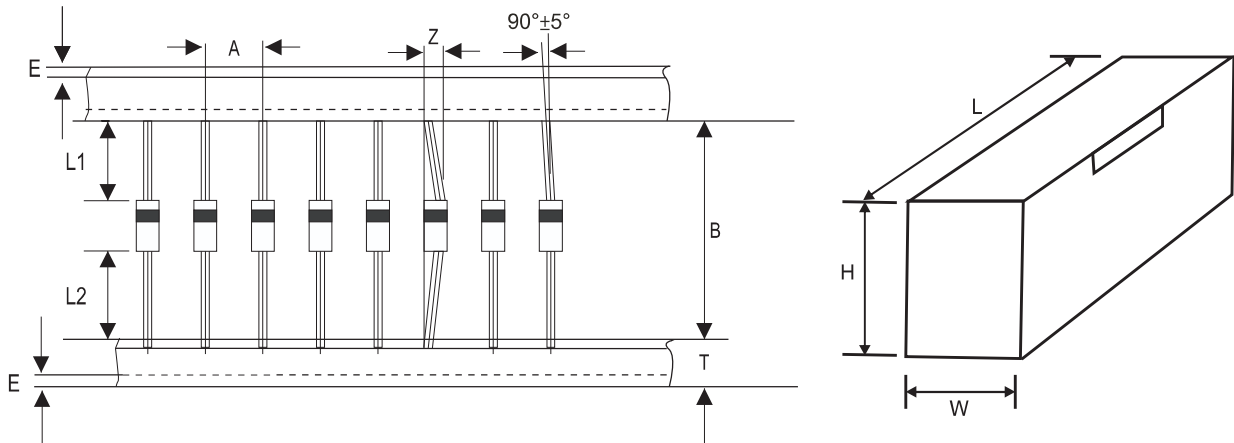


XXX = Product type marking code

Standard Packaging

Case Type	AMMO PACK
	BOX (pcs)
DO-41	5,000

Taping Specification For Axial Lead Diodes



DO-41	SYMBOL	A	B	Z	T	E	IL1-L2I
	(mm)	5.00 ± 0.50	52.40 + 1.50 - 0.40	1.20 (max)	6.00 ± 0.40	0.80 (max)	1.00 (max)
	(inch)	0.197 ± 0.020	2.063 + 0.059 - 0.016	0.047 (max)	0.236 ± 0.016	0.031 (max)	0.039 (max)

DO-41	SYMBOL	L	W	H			
	(mm)	255 ± 5.0	75 ± 5.0	150 ± 5.0			
	(inch)	10.04 ± 0.20	2.953 ± 0.197	5.906 ± 0.197			

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