



1.0A Ultra Fast Recovery Rectifier

Rectifier Reverse Voltage 50 to 1000V



Features

- Diffused junction
- Fast switching for high efficiency
- High current capability and low Forward Voltage Drop
- Surge overload rating to 30A peak
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

Mechanical Data

Case: Molded plastic

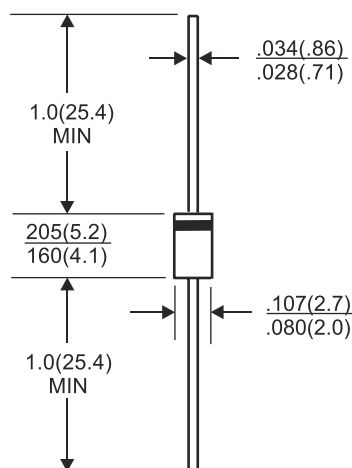
Terminals: Solder plated solderable per MIL-STD-202,
Method 208

Polarity: Cathode band

Mounting Position: Any

Weight: 0.3grams (approx)

DO-41



All dimensions inches and (millimeters)

Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.

For Capacitive load derate current by 20%.

Parameter	Symbol	UF4001	UF4002	UF4003	UF4004	UF4005	UF4006	UF4007	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	VRMS	35	70	140	280	420	560	700	v
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	v
Maximum average forward rectified output current at TA=55°C	IF(AV)	1.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	30							A
Maximum reverse recovery time TJ=25°C	Trr	50				75			nS
Typical thermal resistance per element	ReJA	50							°C/W
Typical junction capacitance per element	Cj	20				15			pF
Operating junction and storage temperature range	TJ, TSTG	-55 to + 150							°C

Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.

For Capacitive load derate by 20 %.

Parameter	Symbol	UF4001	UF4002	UF4003	UF4004	UF4005	UF4006	UF4007	Unit
Maximum instantaneous forward voltage drop per leg at 1.0A	VF	1.3				1.7			V
Maximum DC reverse current at rated TA =25°C DC blocking voltage per element TA =125°C	IR	10 100							μA

Rating and Characteristic Curves ($T_A=25^{\circ}\text{C}$ Unless otherwise noted) UF4001 thru UF4007

Fig. 1 Reverse Recovery Time and Test Circuit Diagram

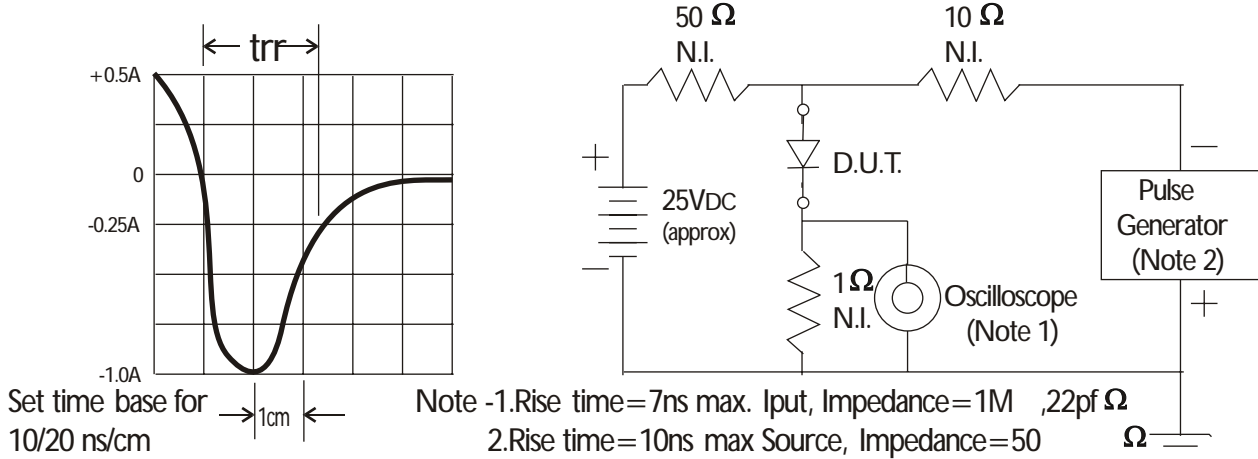


Fig. 2 Derating Curve for Output Rectified Current

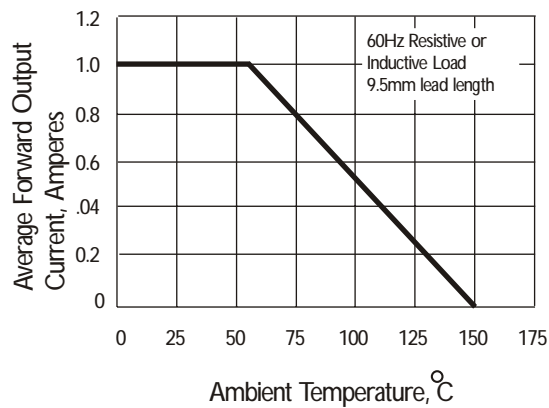


Fig. 3 Peak Forward Surge Current

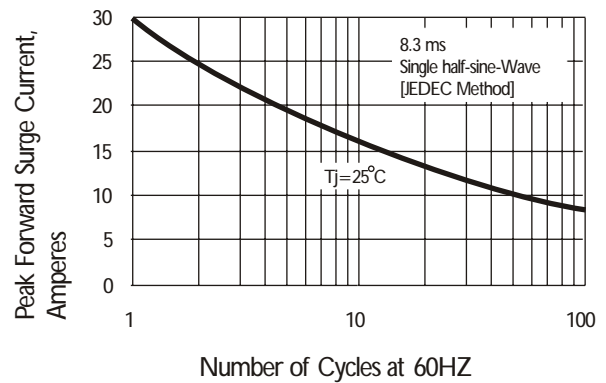


Fig. 4 Typical Instantaneous Forward Characteristics

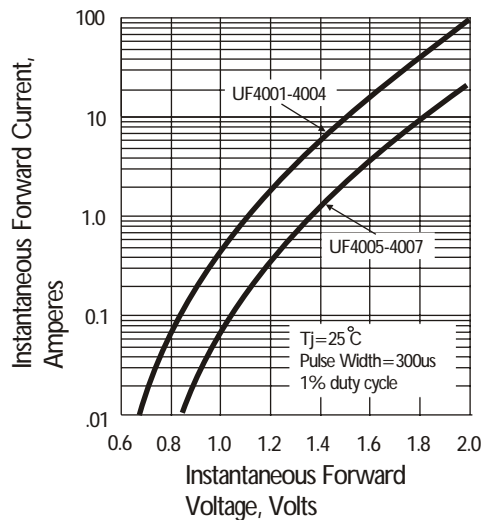


Fig. 5 Typical Junction Capacitance

