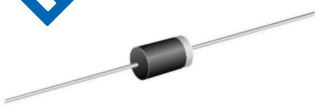
UF3A thru UF3M

Crownpo Technology



Ultrafast Plastic Rectifier

Reverse Voltage 50 to 1000V
Forward Current 3.0A

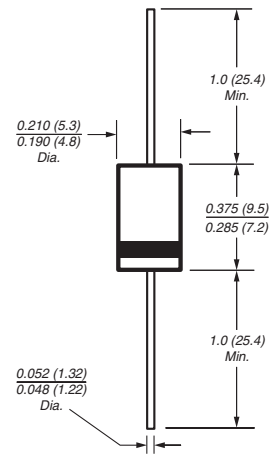
Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ultrafast recovery time for high efficiency
- Low forward voltage, high current capability
- Low leakage
- High surge capability
- High temperature soldering guaranteed: 250°C, 0.375" (9.5mm) lead length for 10 seconds, 5 lbs. (2.3kg) tension

Mechanical Data

Case: JEDEC DO-201AD molded plastic body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.04 oz., 1.1 g

DO-201AD



Dimensions in inches and (millimeters)

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	UF3A	UF3B	UF3D	UF3G	UF3J	UF3K	UF3M	Units
Maximum 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
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current, 0.375" (9.5mm) lead length at T_A=55°C	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at T_A=55°C	I_{FSM}	150							A
Typical thermal resistance (1)	$R_{\theta JA}$ $R_{\theta JL}$	20 8.5							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter		Symbols	UF3A	UF3B	UF3D	UF3G	UF3J	UF3K	UF3M	Units
Maximum instantaneous forward voltage at 3.0A (2)		V_F	1.3				1.7			V
Maximum DC reverse current at rated DC blocking voltage	T_A = 25°C	I_R	10							μA
	T_A =100°C		75				200			
Maximum reverse recovery time at I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A	T_J = 25°C	t_{rr}	50				75			ns
Typical junction capacitance at 4.0V, 1MHz		C_J	75				50			pF

Notes:
(1) Thermal resistance from junction to lead and from junction to ambient with 0.375" (9.5mm) lead length, both leads attached to heatsink
(2) Pulse test: 300μs pulse width, 1% duty cycle

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

Fig. 1 - Maximum Forward Current Derating Curve

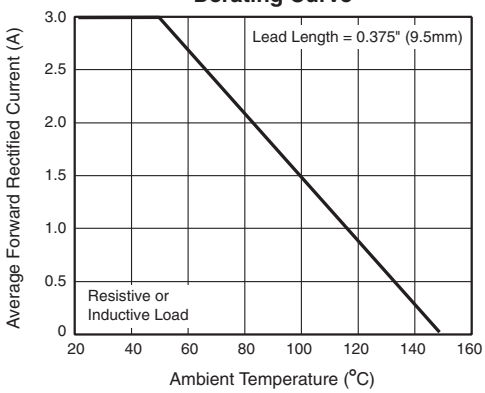


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

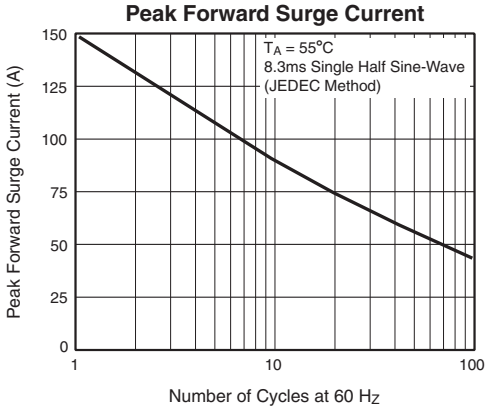


Fig. 3 - Typical Instantaneous Forward Characteristics

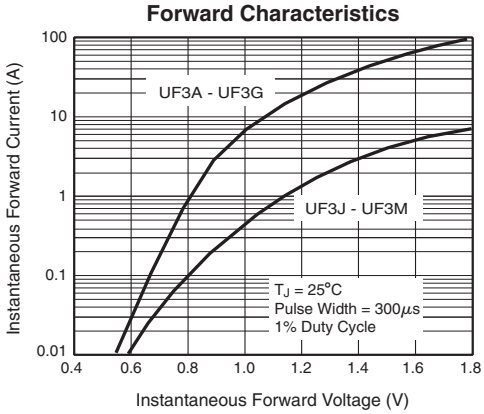


Fig. 4 - Typical Reverse Leakage Characteristics

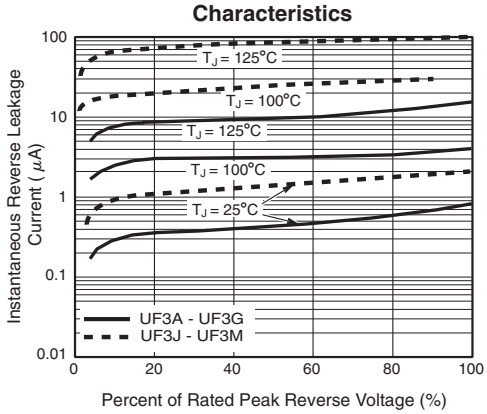


Fig. 5 - Typical Junction Capacitance