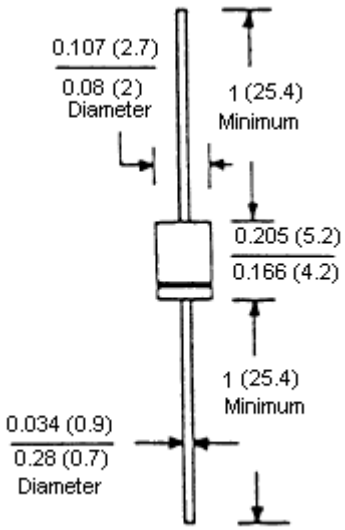
Power Diodes

Ultra-Fast Recovery

Axial

DO-41



Dimensions : Millimetres

Features:

- 1 ampere operation at T_A = 55°C with no thermal runaway
- Glass passivated chip junction
- Low cost, fast efficient plastic rectifiers
- Ultrafast recovery time for high efficiency
- Low forward voltage
- Low leakage current
- High surge current capability

Mechanical Data:

Case	: JEDEC DO-41 moulded plastic body over passivated chip
Terminals	: Plated axial leads, solderable per MIL-STD-750, Method 2026
Mounting position	: Any
Polarity	: Colour band denotes cathode end
High temperature	: 250°C / 10 seconds / 0.375 inches, (9.5 mm) lead lengths at soldering guaranteed 5lbs, (2.3 kg) tension

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%

Type Number	UF4001	UF4002	UF4003	UF4004	UF4005	UF4006	UF4007	Unit
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1,000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	
Maximum DC Blocking Voltage	50	100	200	400	600	800	1,000	
Maximum Average Forward Rectified Current 0.375 inches (9.5 mm) Lead Length at T_A = 55°C	1							A
Peak Forward Surge Current, 8.3 ms Single Half Sinewave Superimposed on Rated Load (JEDEC method)	30							
Maximum Instantaneous Forward Voltage at 1 A	1				1.7			V
Maximum DC Reverse Current at T_A = 25°C at Rated DC Blocking Voltage at T_A = 125°C	10 50							µA
Maximum Reverse Recovery Time (Note 1)	50				75			-
Typical Junction Capacitance (Note 2)	17							-
Typical Thermal Resistance (Note 3) RθJA RθJL	60 15							°C / W
Operating/Storage Temperature Range T_J ,T_{STG}	-65 to +150							°C

Notes:

1. Reverse recovery test conditions : I_F = 0.5 A, I_R = 1 A, I_{RR} = 0.25 A
2. Measured at 1 MHz and applied reverse voltage of 4 V dc
3. Thermal resistance from junction to ambient and from junction to lead length 0.375 inches (9.5 mm), PCB mounted

Ratings and Characteristic Curves

Figure - 1 Maximum Forward Current Derating Curve

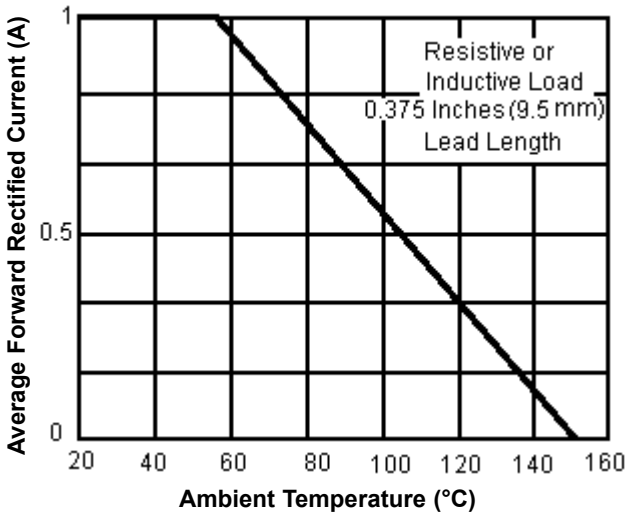


Figure - 2 Maximum Non-Repetitive Peak Forward Surge Current

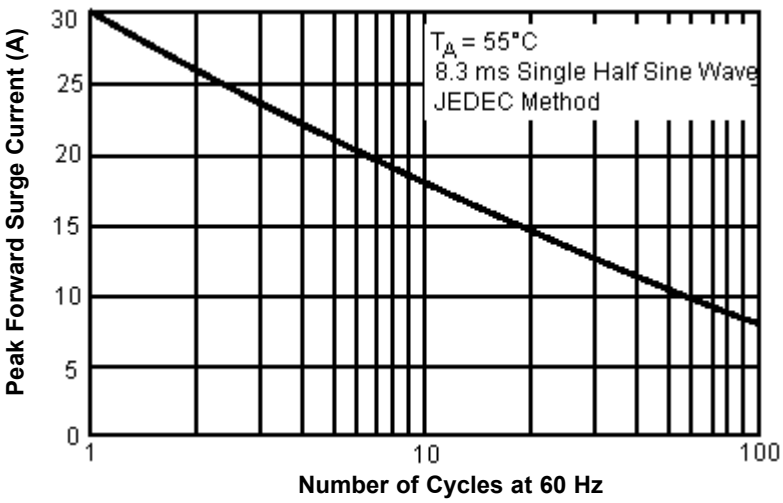


Figure - 3 Typical Reverse Characteristics

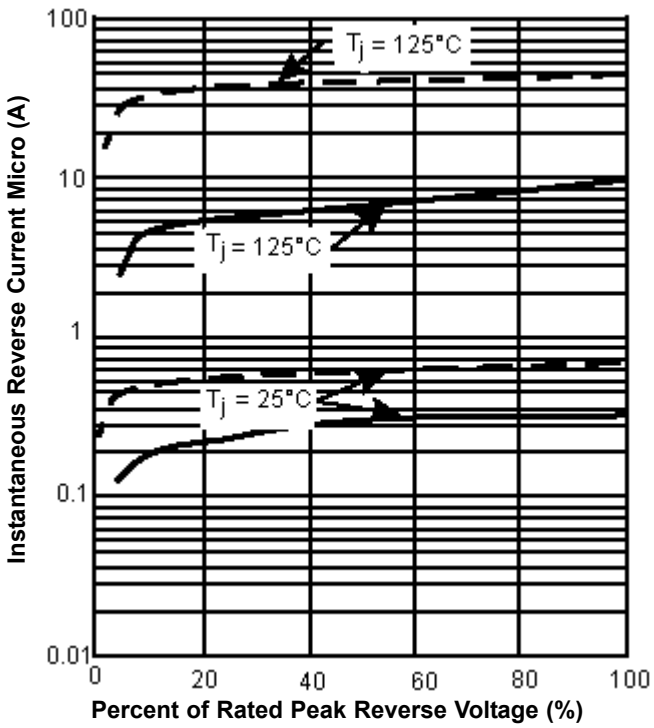
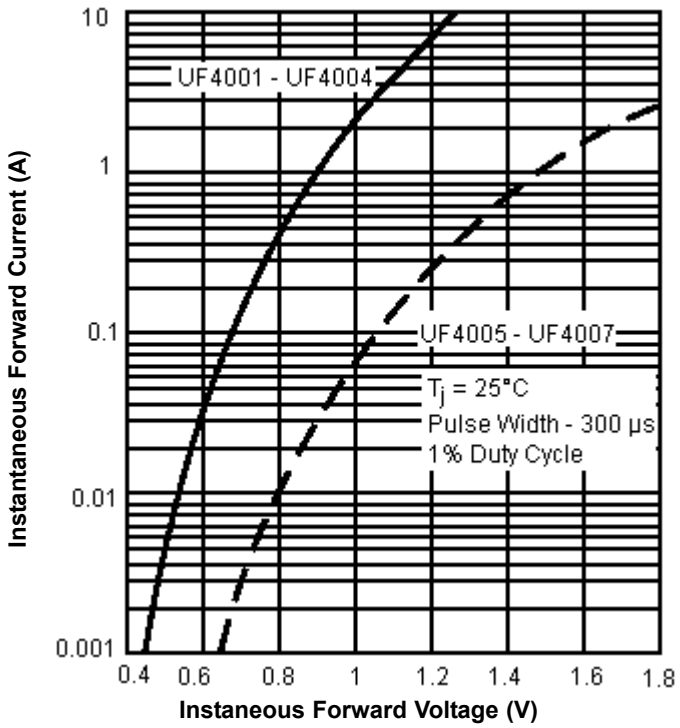
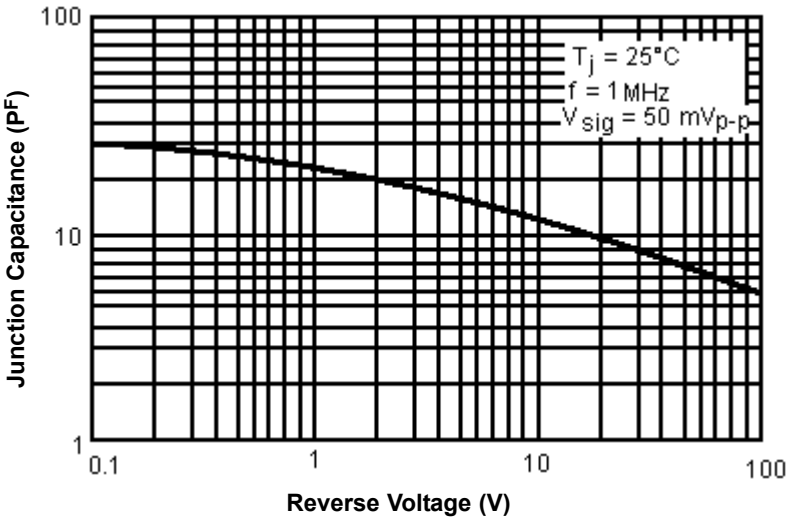


Figure - 4 Typical Instantaneous Forward Characteristics



Ratings and Characteristic Curves

Figure - 5 Typical Junction Capacitance



Specification Table

$I_{f\ (av)}$ (A)	t_{rr} (ns)	I_{fsm} (A)	V_f maximum (V)	Length	Diameter	Package	Part Number
1	50	30	1	5.2	2.7	DO -41	UF4001
							UF4002
							UF4003
							UF4004
1	75		1.7				UF4005
							UF4006
							UF4007

Dimensions : Millimetres