



Features:

- Plastic package
- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- Glass passivated chip junction
- Excellent high temperature switching
- Ultrafast recovery time for high efficiency
- Soft recovery characteristics
- High temperature soldering guaranteed: 260°C/10 seconds/0.375", (9.5mm) lead lengths at 5lbs., (2.3kg) tension

Specifications:

Mechanical Data:

Cases	: JEDEC DO-204AL moulded plastic body over passivated chip
Terminals	: Pure tin plated, lead free, solderable per MIL-STD-750, Method 2026
Polarity	: Colour band denotes cathode end
Mounting Position	: Any
Weight	: 0.012oz, 0.34g

Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Parameters	Symbol	UF1A	UF1B	UF1D	UF1G	UF1J	UF1K	UF1M	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1,000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1,000	
Maximum Average Forward Rectified Current 0.375 (9.5mm) Lead Length at T _A = 55°C	I _(AV)	1							A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	30							
Maximum Instantaneous Forward Voltage at 1A	V _F	1				1.7			V

Ultra Fast Diode

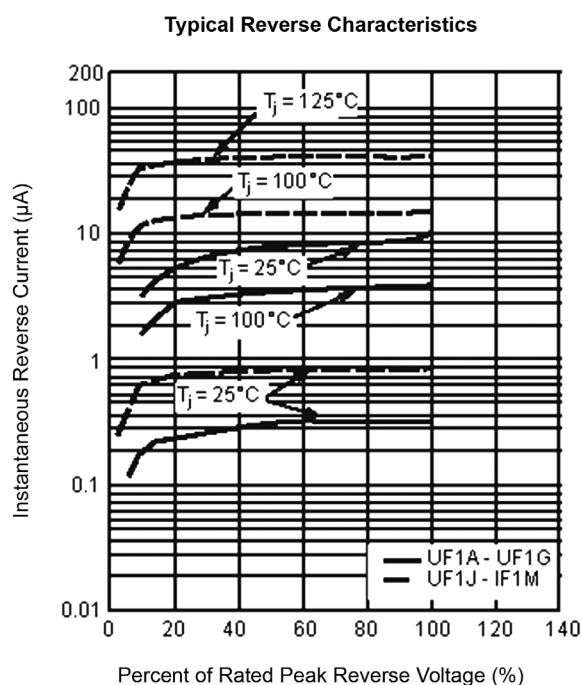
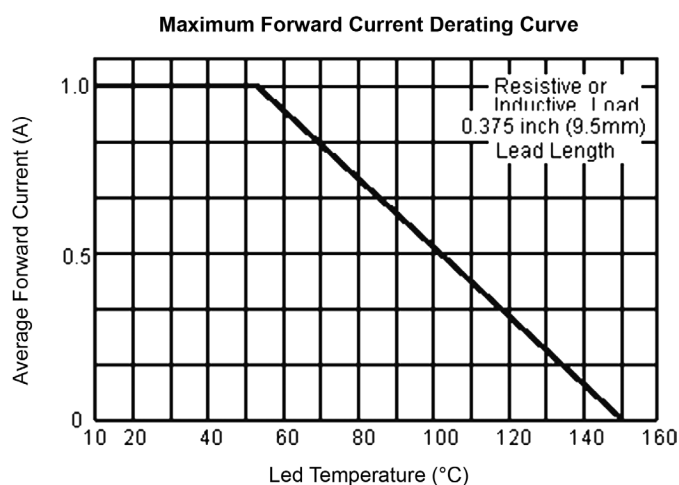


Parameters	Symbol	UF1A	UF1B	UF1D	UF1G	UF1J	UF1K	UF1M	Units
Maximum DC Reverse Current at T _A = 25°C at Rated DC Blocking Voltage at T _A = 125°C	I _R	5 150							μA μA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	50				75			nS
Typical Junction Capacitance (Note 2)	C _j	17							pF
Typical Thermal Resistance (Note 3)	R _{θJA} R _{θJL}	60 15							°C/W
Operating Junction Temperature Range	T _J , T _{STG}	-55 to +150							°C

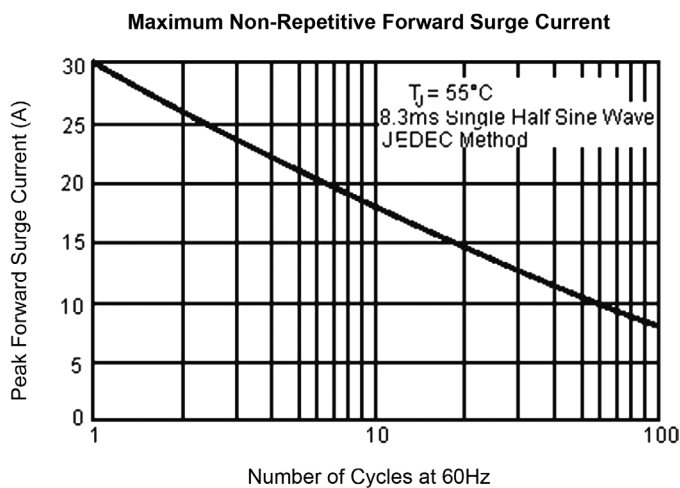
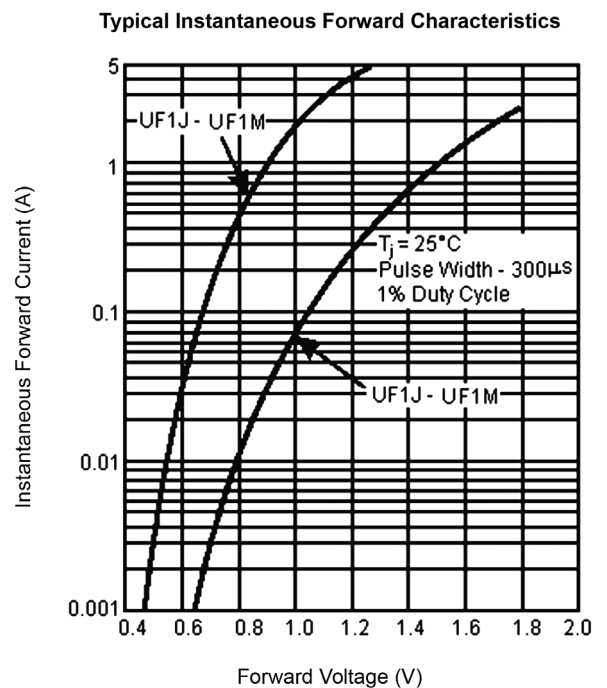
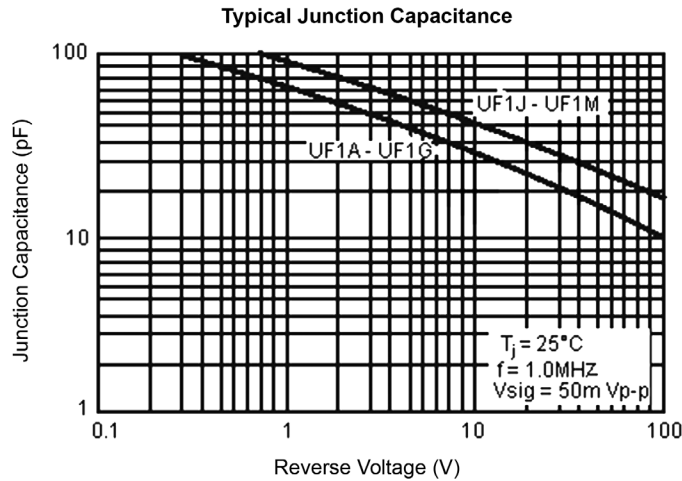
Notes:

- Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$.
- Measured at 1MHz and Applied Reverse Voltage of 4V DC.
- Thermal Resistance from junction to ambient and from Junction to Lead length 0.375 inch (9.5mm), Mounted on 0.2" x 0.2" (5mm x 5mm) Cu pads.

Ratings and Characteristic Curves



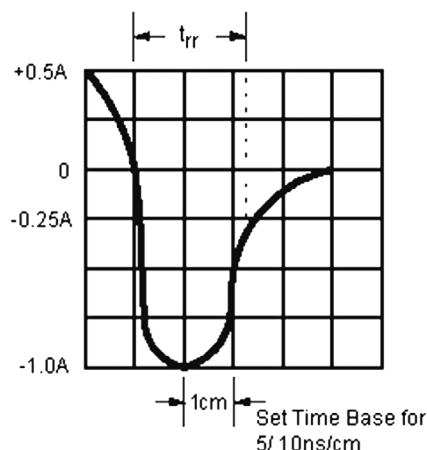
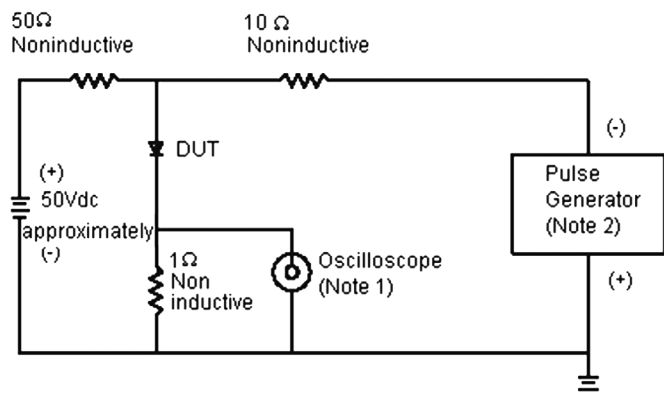
Ultra Fast Diode



Ultra Fast Diode



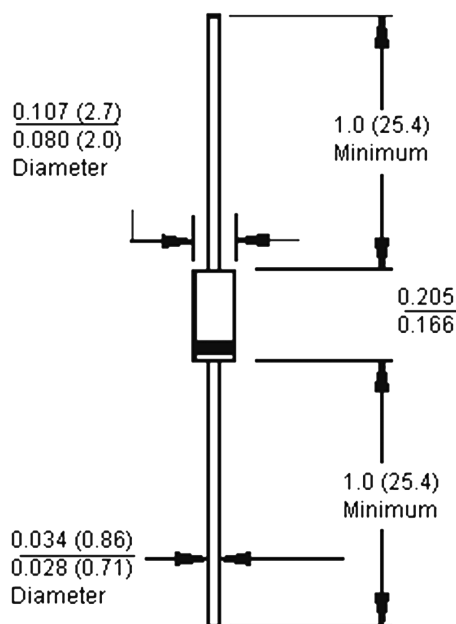
Reverse Recovery Time Characteristic and Test Circuit Diagram



Notes:

1. Rise Time = 7ns Maximum. Input Impedance = 1MΩ 22pf
2. Rise Time = 10ns Maximum Source Impedance = 50Ω

DO-41 / DO-204AL



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Diode, Ultra-Fast, 1A, 50V	UF1A
Diode, Ultra-Fast, 1A, 100V	UF1B
Diode, Ultra-Fast, 1A, 200V	UF1D
Diode, Ultra-Fast, 1A, 400V	UF1G
Diode, Ultra-Fast, 1A, 600V	UF1J
Diode, Ultra-Fast, 1A, 800V	UF1K
Diode, Ultra-Fast, 1A, 1,000V	UF1M

Important Notice : This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell plc 2012.