

Features

- ✧ Plastic package has Underwriters Laboratory Flammability Classification 94V0
- ✧ 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/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.



Mechanical Data

- ✧ Case: JEDEC DO-204AL molded plastic body over passivated chip
- ✧ Terminals: Pure tin plate, lead free, solderable per MIL-STD-750, Method 2026
- ✧ Polarity: Color band denotes cathode
- ✧ Mounting Position: Any
- ✧ Weight: 0.34 grams

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	Symbol	UF1A	UF1B	UF1D	UF1G	UF1J	UF1K	UF1M	Units
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	$I_{F(AV)}$	1							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage (Note 1) @ 1 A	V_F	1.0				1.7			V
Maximum DC Reverse Current at @ $T_A=25\text{ }^\circ\text{C}$	I_R	5							uA
Rated DC Blocking Voltage @ $T_A=125\text{ }^\circ\text{C}$		150							uA
Maximum Reverse Recovery Time (Note 2)	T_{rr}	50				75			nS
Typical Junction Capacitance (Note 3)	C_j	17							pF
Typical Thermal Resistance	$R_{\theta JA}$	60							$^\circ\text{C/W}$
	$R_{\theta JL}$	15							
Operating/Storage Temperature Range	T_J, T_{STG}	- 55 to + 150							$^\circ\text{C}$

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

RATINGS AND CHARACTERISTIC CURVES (UF1A THRU UF1M)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

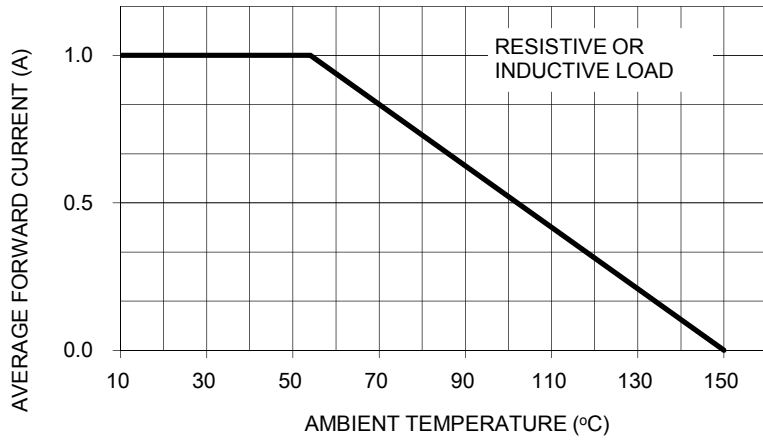


FIG. 2- TYPICAL FORWARD CHARACTERISTICS

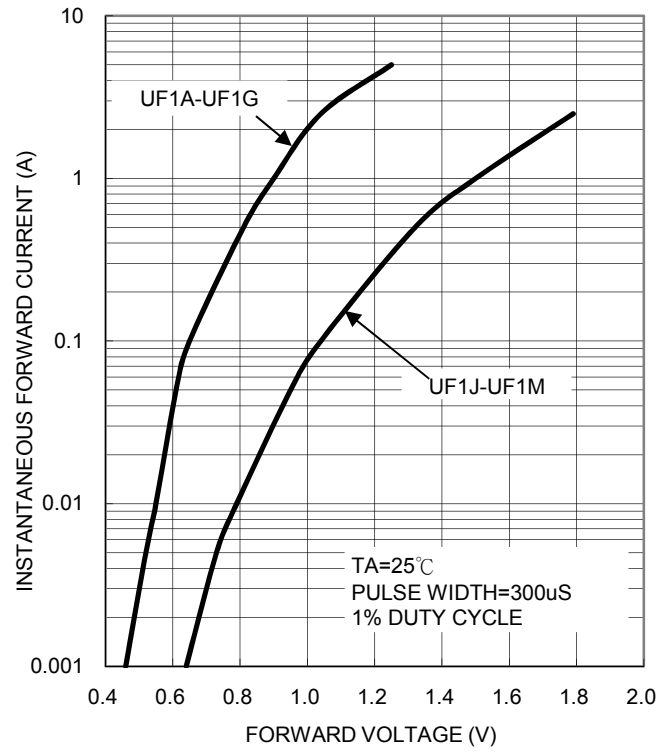


FIG. 3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

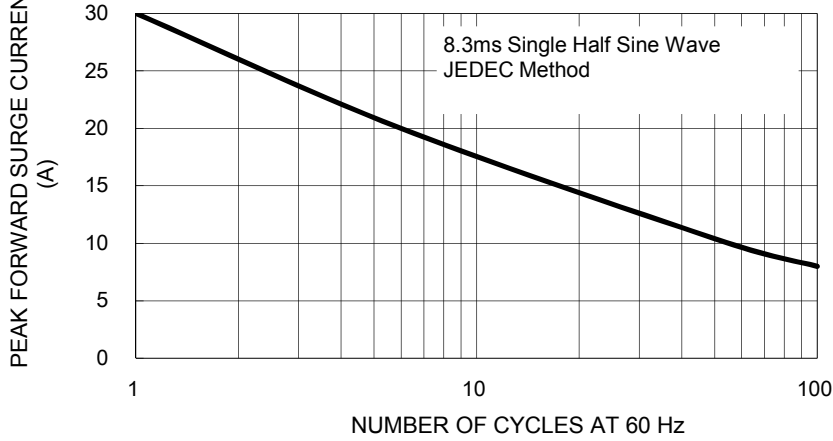


FIG. 5- TYPICAL REVERSE CHARACTERISTICS

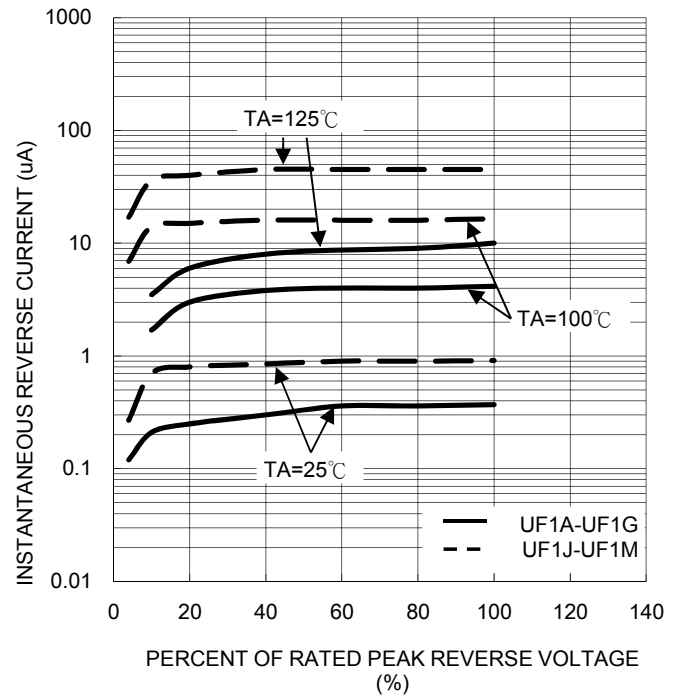


FIG. 4- TYPICAL JUNCTION CAPACITANCE

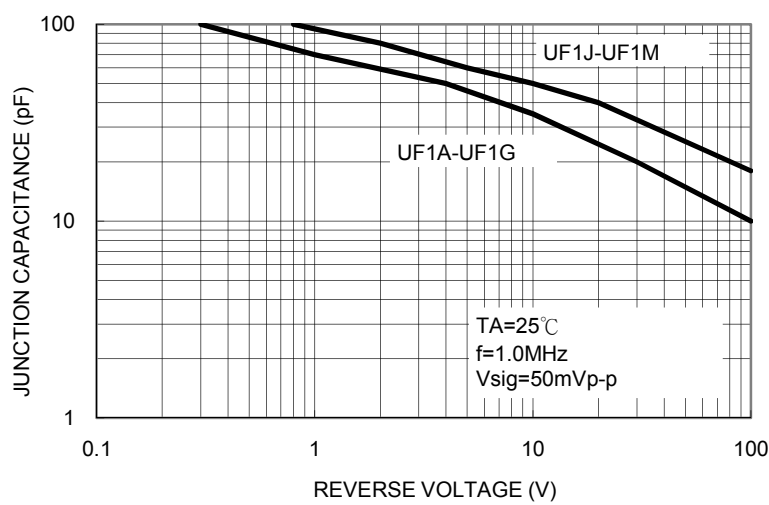
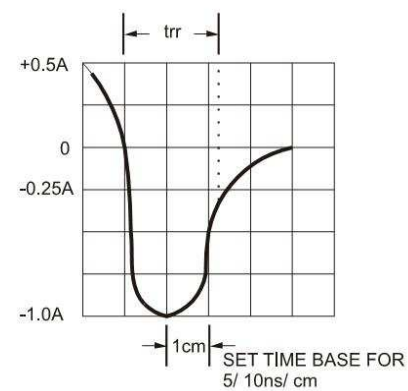
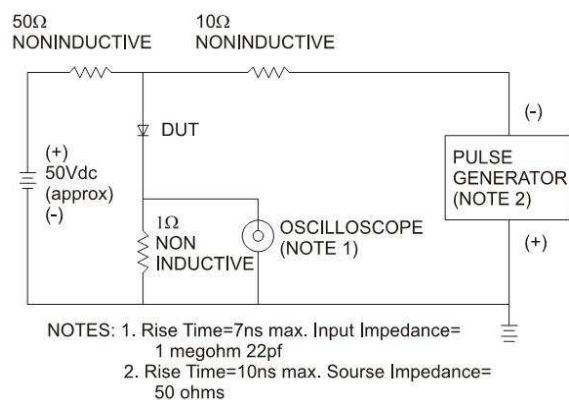


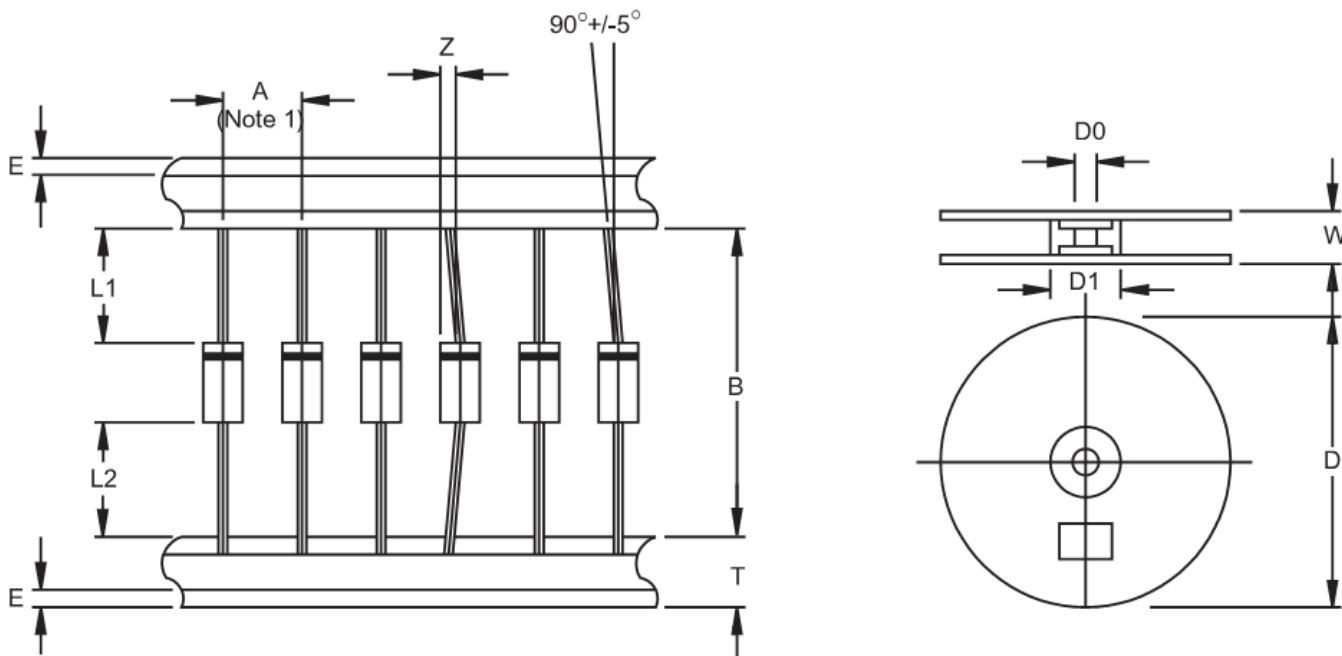
FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



Ordering information

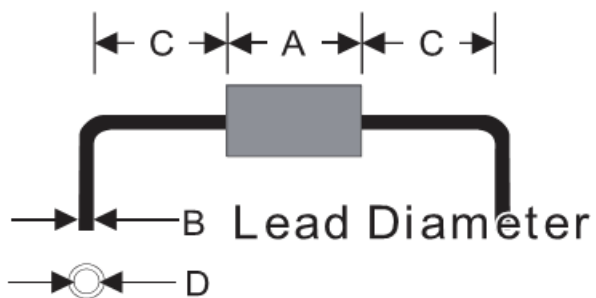
Part No.	Package	Packing	INNER TAPE	Packing code	Green Compound Packing code
UF1x	DO-41	3K / AMMO box	52mm	A0	A0G
	DO-41	5K / 13" Reel	52mm	R0	R0G
	DO-41	5K / 13" Reel	52mm	R1	R1G
	DO-41	1K / Bulk packing		B0	B0G
	DO-41	1K / Bulk packing		X0	X0G

Note: "x" is Device Code from "A" thru "M".

AXIAL LEAD TAPING SPECIFICATIONS


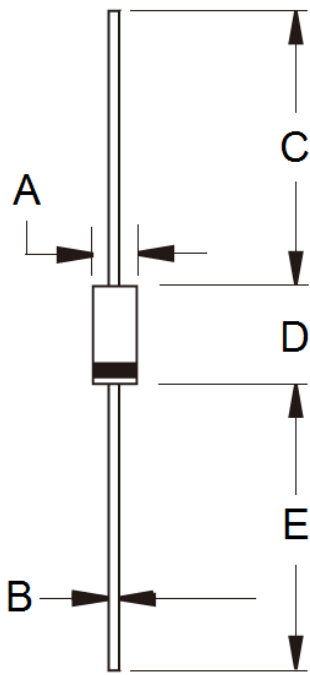
Outline	A	B	Z	T	E	L1-L2	D	D1	D0	W
	±0.5	±1.5	MAX	±0.4	MAX	MAX		±0.3	±0.4	±1.0
DO-41	5	52.4	1.2	6	0.8	1	330	85.7	16.6	76

Unit (mm)

Suggested Mounting Hole Rule


Symbol	Unit(mm)
A	5.1
B	0.8
C	3.0
D	1.2

Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	2.00	2.70	0.079	0.106
B	0.71	0.86	0.028	0.034
C	25.40	-	1.000	-
D	4.20	5.20	0.165	0.205
E	25.40	-	1.000	-

Marking Diagram



- P/N = Specific Device Code
- G = Green Compound
- YWW = Date Code