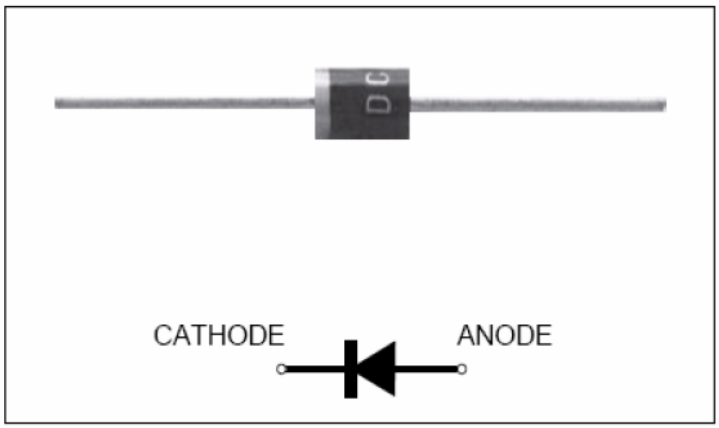
UF4001 thru UF4007

1.Feature & Dimensions

* Plastic package has Underwriters Laboratories Flammability Classification 94V-0
* Ideally suited for use in very high frequency switching
* power supplies, inverters and as free wheeling diodes
* Ultrafast recovery time for high efficiency
* Excellent high temperature switching
* Soft recovery characteristics
* Diffused junction
* High temperature soldering guaranteed: 260°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

Ultrafast Rectifiers

Reverse Voltage 50 to 1000V
Forward Current 1.0A



We declare that the material of product compliance with RoHS requirements.

2.Mechanical Data

Case: JEDEC DO-41, molded plastic body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.011 oz., 0.284 g
Handling precautin:None

3.Electrical Characteristic

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	UF 4001	UF 4002	UF 4003	UF 4004	UF 4005	UF 4006	UF 4007	Unit
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 = 75°C	IF(AV)	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							A
Maximum full load reverse current, full cycle average,0.375"(9.5mm) lead lengths at T_A = 55° C	IR(AV)	100							μA
Typical thermal resistance (Note 2)	RθJA	50							°C/W
Operating junction and storage temperature range	TJ, TSTG	–50 to +150							°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	UF 4001	UF 4002	UF 4003	UF 4004	UF 4005	UF 4006	UF 4007	Unit
Maximum instantaneous forward voltage at 1.0A	V_F	1.00				1.70			V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TA = 100°C	IR	5.0 100							μA
Typical reverse recovery time (Note 1)	trr	50				75			ns
Typical junction capacitance at 4.0V, 1MHz	CJ	17							PF

NOTES:
1. IF = 0.5A, IR = 1.0A, IRR = 0.25A
2. Thermal resistance from junction to ambient at 0.375” (9.5mm) lead length, P.C.B. mounted

4. Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

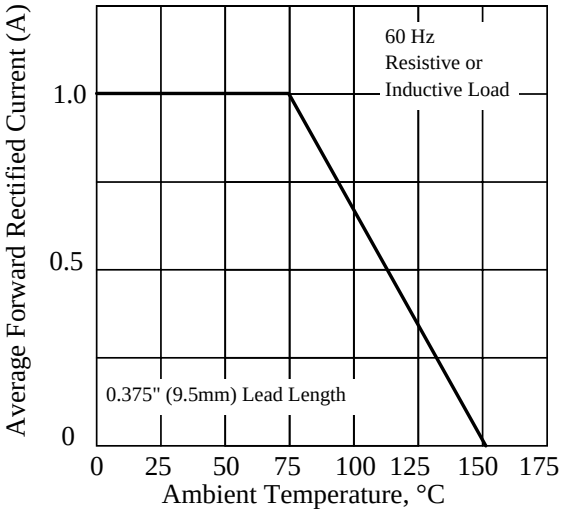


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

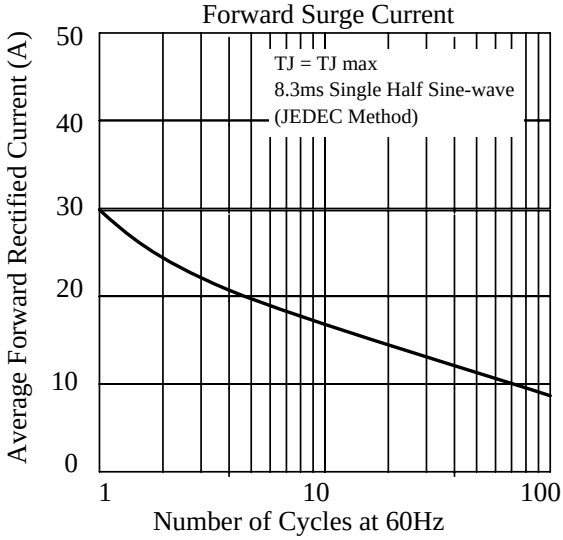


Fig 3. – Typical Instantaneous Forward Characteristics

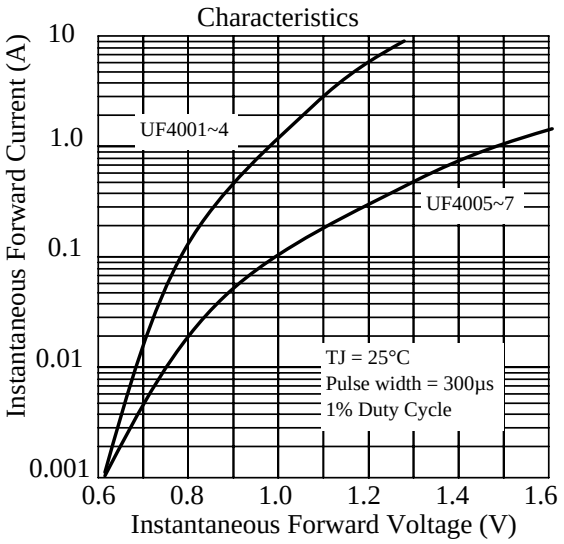


Fig 4. – Typical Reverse Characteristics

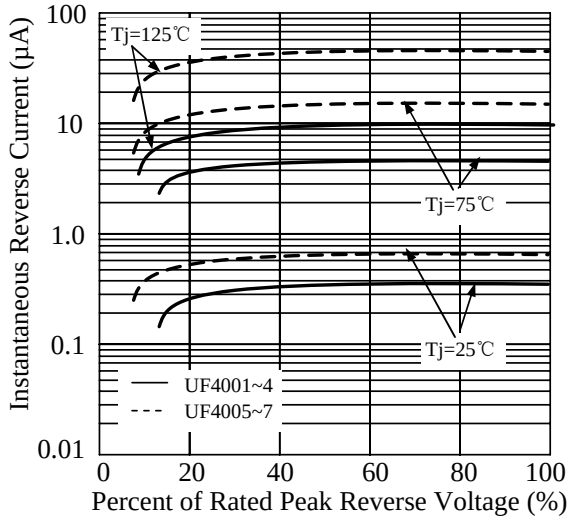


Fig 5. – typical transient thermal impedance

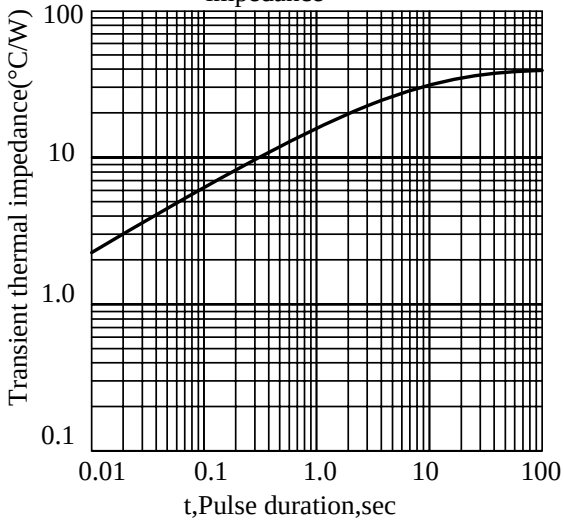
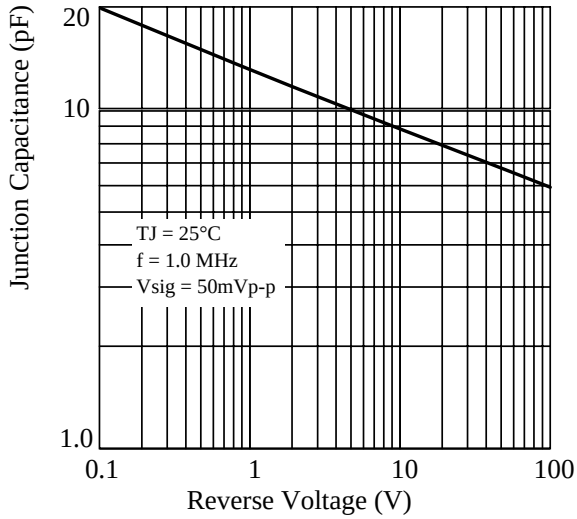
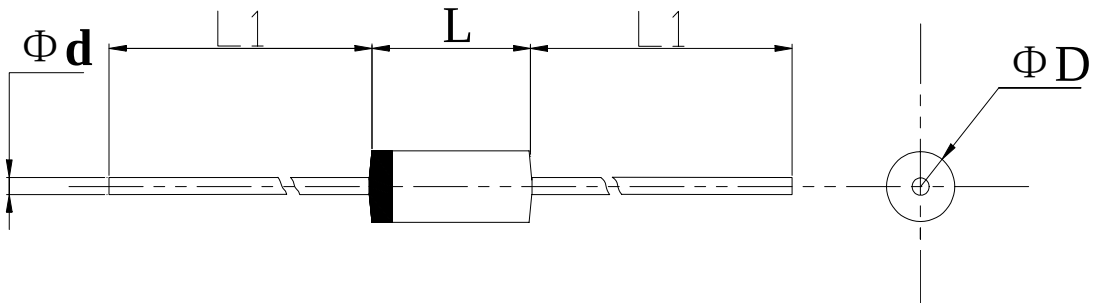


Fig 6. – Typical Junction Capacitance



5.Package Dimensions in inches and (millmeters)

Package outline



Dimensions				
	inches		mm	
	Min.	Max.	Min.	Max.
L	0.166	0.205	4.2	5.2
L1	1.0	-	25.4	-
ΦD	0.080	0.107	2.0	2.7
Φd	0.028	0.034	0.7	0.9

Note:
DO-41
molded plastic case
The marking band indicates the cathode