

## UF5400 thru UF5408

### 1.FEATURES

- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* High temperature metallurgically bonded construction
- \* Diffused junction
- \* Capable of meeting environmental standards of MIL-S-19500
- \* For use in high frequency rectifier circuits
- \* Ultrafast recovery time for high efficiency
- \* High temperature soldering guaranteed: 260°C/10 seconds
- \* 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### 2.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:** 0.038 oz., 1.03 g

**Handling precautin:**None

### 3.Electrical Characteristic

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

Parameter Symbol	symbol	UF54 00	UF54 01	UF54 02	UF54 03	UF54 04	UF54 05	UF54 06	UF54 07	UF54 08	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	300	400	500	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	210	280	350	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	300	400	500	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	3.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150									A
Typical thermal resistance (Note 2)	$R\theta_{JA}$	20									°C/W
Maximum DC blocking voltage temperature	$T_A$	150									°C
Operating junction temperature range	$T_J$	-50 to +150									°C
Storage temperature range	$T_{STG}$	-50 to +150									°C

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

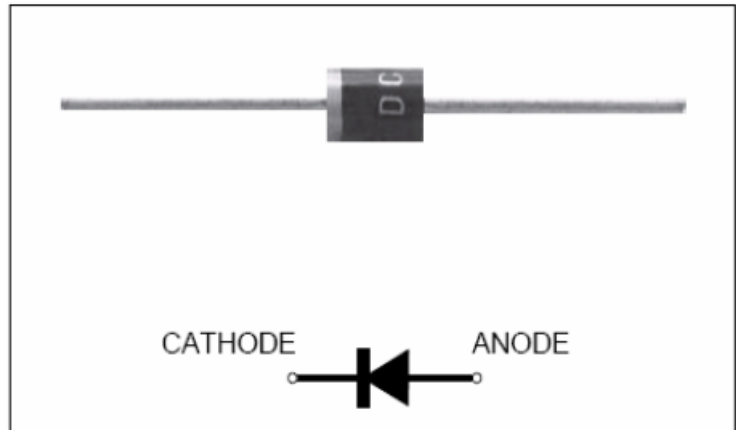
Parameter Symbol	symbol	UF54 00	UF54 01	UF54 02	UF54 03	UF54 04	UF54 05	UF54 06	UF54 07	UF54 08	Unit
Maximum instantaneous forward voltage at 3.0A	$V_F$	1.00		1.30		1.70				V	
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	$I_R$	10 200									µA
Typical reverse recovery time (Note 1)	$t_{rr}$	50				75				ns	
Typical junction capacitance at 4.0V, 1MHz	$C_J$	45				36				PF	

NOTES:

1.  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $IRR = 0.25\text{A}$
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

### Ultrafast Rectifiers

Reverse Voltage 50 to 1000V  
Forward Current 3.0A



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

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

Fig. 1 - Forward Current Derating Curve

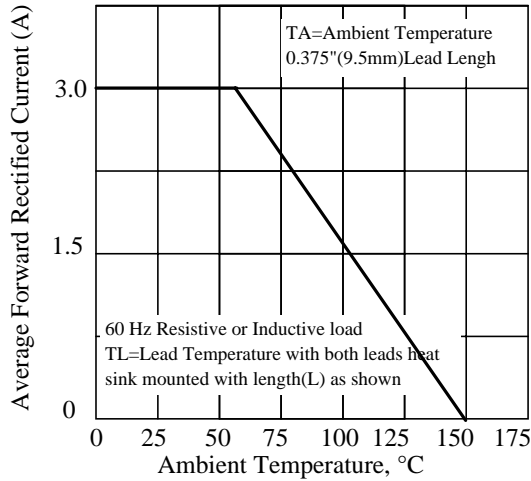


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

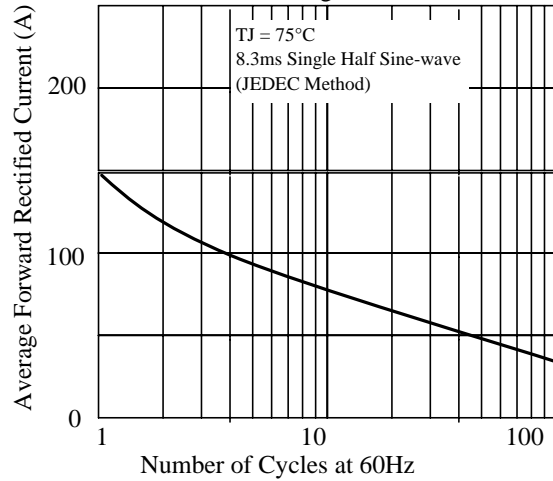


Fig. 3. - Typical Instantaneous Forward Characteristics

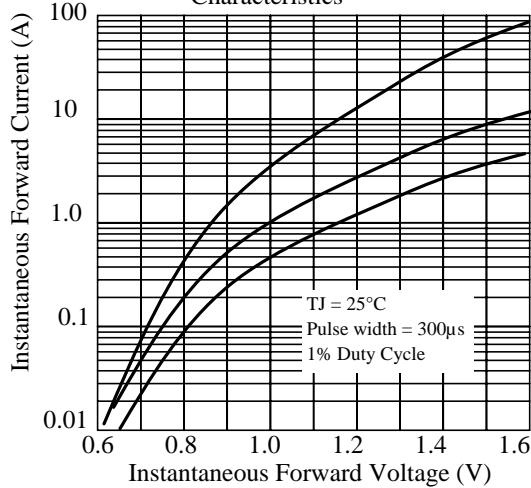


Fig. 4. - Typical Reverse Characteristics

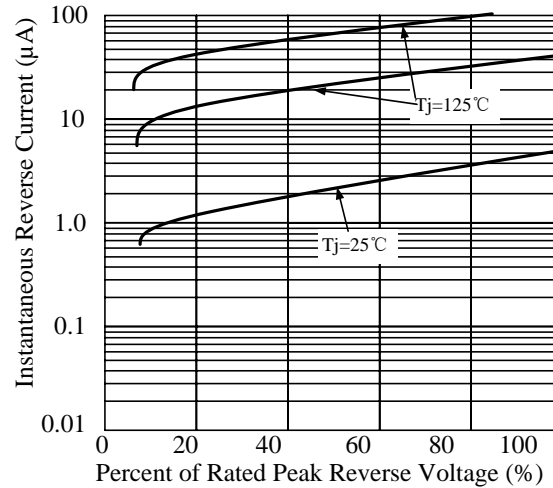


Fig 5. - typical transient thermal impedance

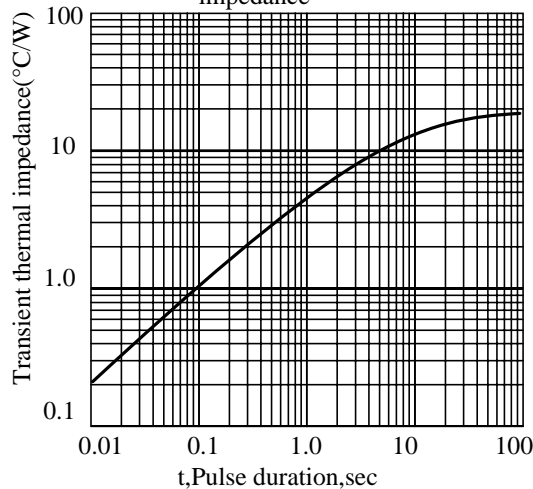
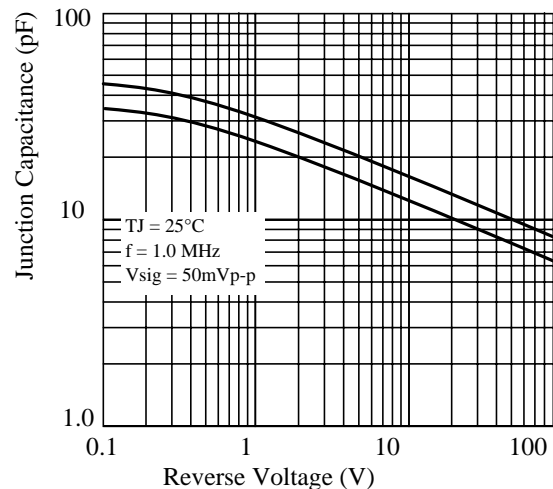


Fig 6. - Typical Junction Capacitance



**5.Package Dimensions in inches and (millimeters)**
