

4 AMP ULTRAFAST RECOVERY DIODES

FEATURES

- **PROPRIETARY SOFT GLASS[®] JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE**
- **VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical $\leq 2\%$, Max. $\leq 10\%$ of Die Area)**
- **LOW SWITCHING NOISE**
- **LOW THERMAL RESISTANCE**
- **HIGH SWITCHING CAPABILITY**
- **LOW FORWARD VOLTAGE DROP**

MECHANICAL DATA

- Case: JEDEC DO-27 molded epoxy (UL Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.04 Ounces (1.12 Grams)

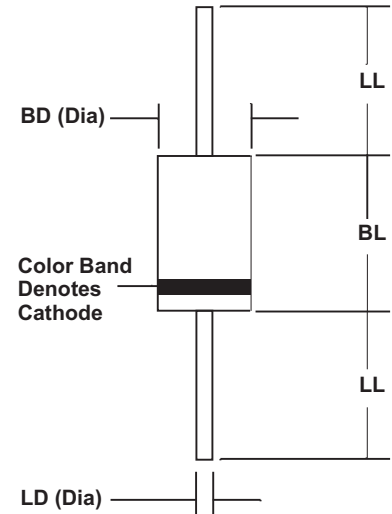
RoHS COMPLIANT

MECHANICAL SPECIFICATION

ACTUAL SIZE OF
DO-27 PACKAGE

SERIES UFR400 - UFR410

DO - 27



Sym	Minimum		Maximum	
	In	mm	In	mm
BL			0.365	9.28
BD			0.205	5.2
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

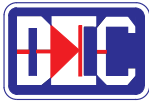
MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
 Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS										UNITS
Series Number		UFR 400	UFR 401	UFR 402	UFR 403	UFR 404	UFR 406	UFR 408	UFR 409	UFR 410		
Maximum DC Blocking Voltage	VRM	50	100	200	300	400	600	800	900	1000	VOLTS	
Maximum RMS Voltage	VRMS	35	70	140	210	280	420	560	630	700		
Maximum Peak Recurrent Reverse Voltage	VRRM	50	100	200	300	400	600	800	900	1000		
Average Forward Rectified Current @ TA = (as shown)	Io	4 @TA=80°C					4 @TA=55°C					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	IFSM	200										
Maximum Forward Voltage at: 3-Amps DC 4-Amps DC	VFM	1.20 1.25					1.70 1.85					VOLTS
Maximum Average DC Reverse Current At Rated DC Blocking Voltage @ TJ = 25 °C @ TJ = 125 °C	IRM	5 50					10 50					µA
Typical Thermal Resistance: Junction to Lead Junction to Air	RθJL RθJA	7.5 18.0										°C/W
Typical Junction Capacitance (Note 1)	CJ	45										pF
Maximum Reverse Recovery Time (IF=0.5A, IR=1A, IRR=0.25A)	TRR	50			60			75				nSec
Junction Operating and Storage Temperature Range	TJ, TSTG	-65 to +175										°C

NOTES: (1) Measured at 1MHz and an applied reverse voltage of 4 volts.

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RATING & CHARACTERISTIC CURVES FOR SERIES UFR400 - UFR410

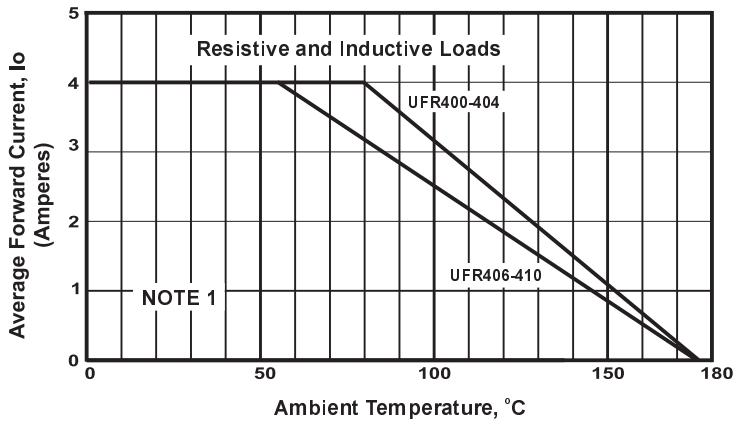


FIGURE 1. FORWARD CURRENT DERATING CURVE

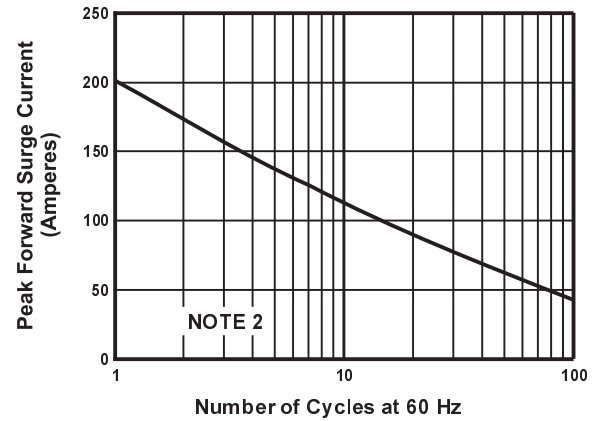


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

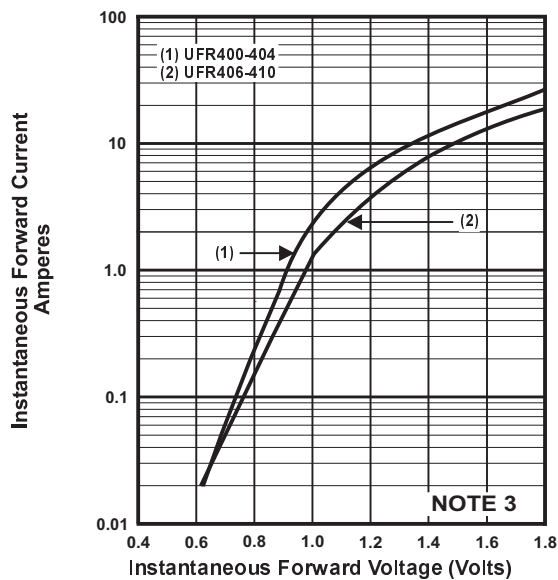


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

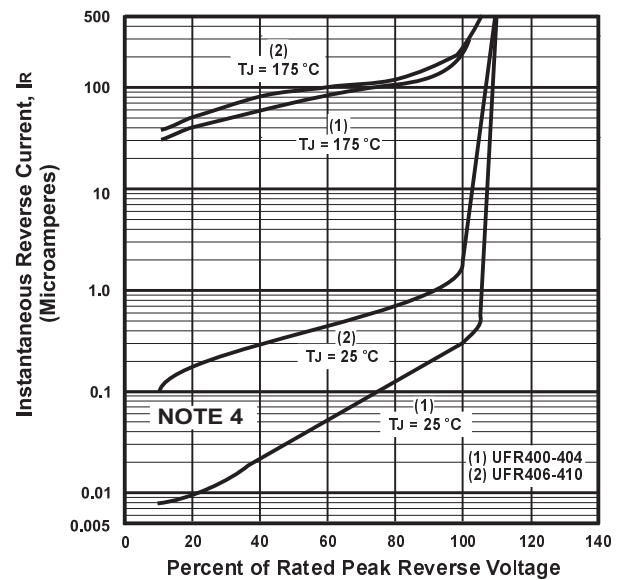


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

NOTES

- (1) Lead Length = 0.375" (9.5mm)
- (2) JEDEC Method, 8.3 mSec. Single Half Sine Wave
- (3) $T_J = 25^\circ\text{C}$, Pulse Width = 300 μSec , 2.0% Duty Cycle
- (4) These Curves Are Typical For The Highest Voltage Diode in The Voltage Grouping.

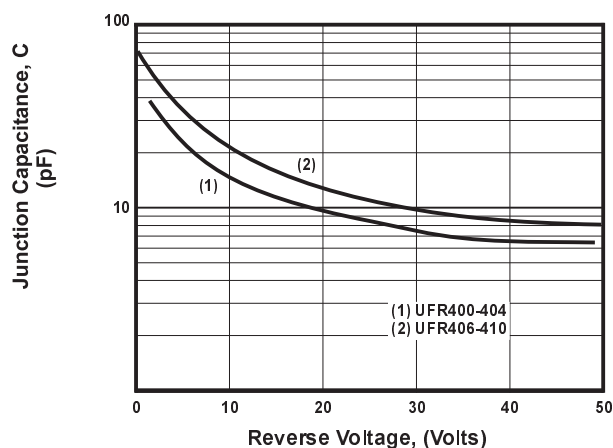


FIGURE 5. TYPICAL JUNCTION CAPACITANCE