

3 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

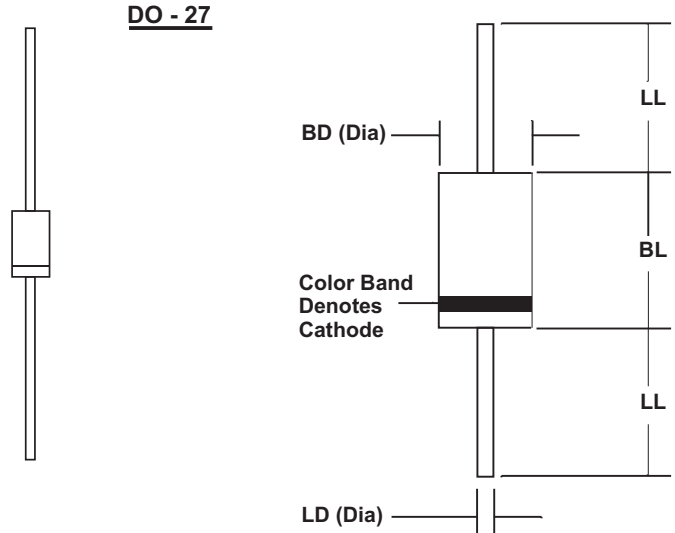
- Case: JEDEC DO-27 molded epoxy (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.04 Ounces (1.12 Grams)

RoHS COMPLIANT

MECHANICAL SPECIFICATION

ACTUAL SIZE OF
DO-27 PACKAGE

SERIES UFR300 - UFR310



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
		UFR 300	UFR 301	UFR 302	UFR 303	UFR 304	UFR 305	UFR 306	UFR 308	UFR 310		
Series Number												
Maximum DC Blocking Voltage	VRM	50	100	200	300	400	500	600	800	1000		
Maximum RMS Voltage	VRMS	35	70	140	210	280	350	420	560	700	VOLTS	
Maximum Peak Recurrent Reverse Voltage	VRRM	50	100	200	300	400	500	600	800	1000		
Average Forward Rectified Current @ TA = 55 °C	IO	3										AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	IFSM	160										
Maximum Forward Voltage at 3 Amps DC	VFM	1.25					1.7					VOLTS
Maximum Average DC Reverse Current @ TC = 25 °C	IRM	5										µA
At Rated DC Blocking Voltage @ TC = 125 °C		50										
Typical Thermal Resistance, Junction to Lead	RθJA	20										°C/W
Typical Junction Capacitance (Note 1)	CJ	45										pF
Maximum Reverse Recovery Time (IF=0.5A, IR=1A, IRR=0.25A)	TRR	50					75					nSec
Junction Operating and Storage Temperature Range	TJ, TSTG	-65 to +150										°C

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

3.01 vfr00



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RATING & CHARACTERISTIC CURVES FOR SERIES UFR300 - UFR310

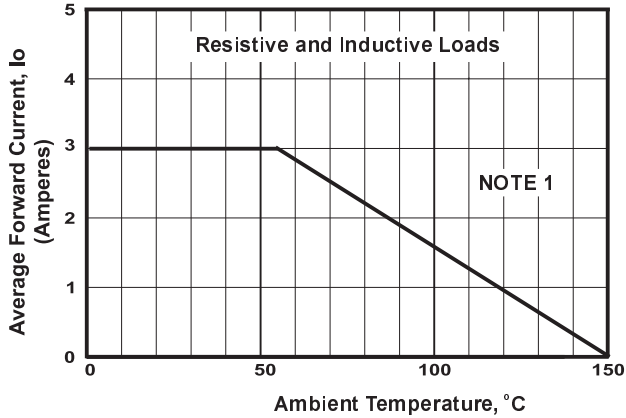


FIGURE 1. FORWARD CURRENT DERATING CURVE

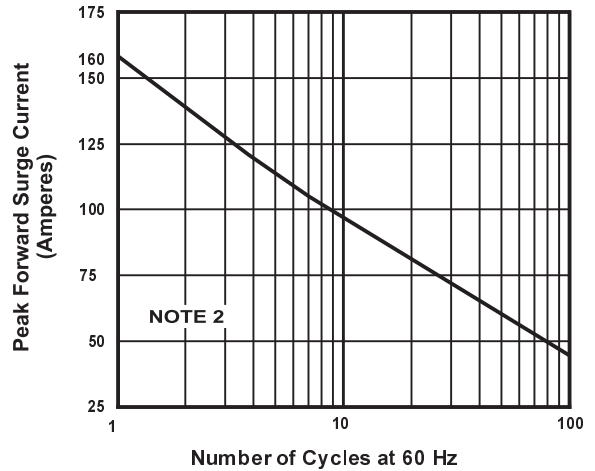


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

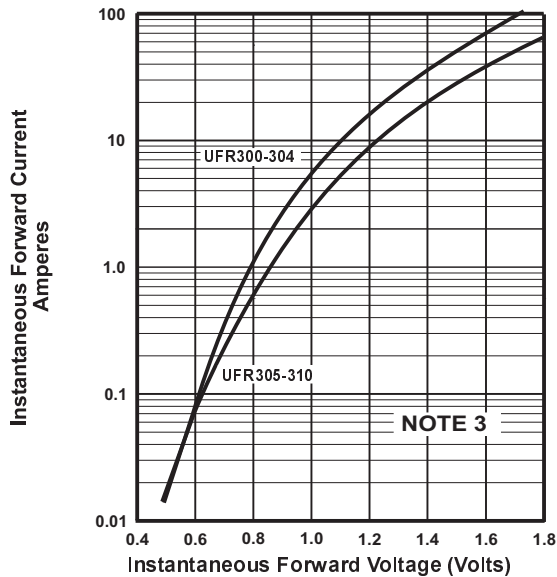


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

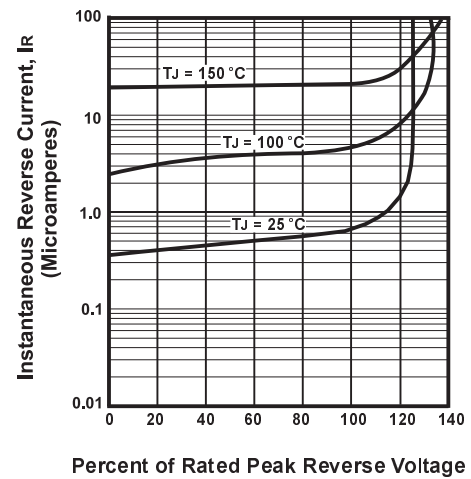


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

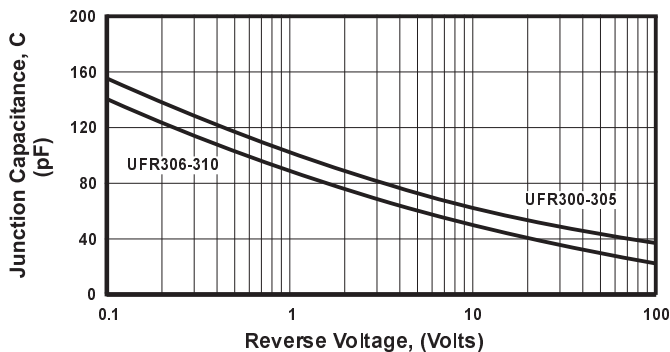


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

- (1) Single Phase, Half Wave, 60 Hz; Lead Length = 0.375" (9.5mm)
- (2) JEDEC Method, 8.3 mSec. Single Half Sine Wave;
- (3) T_J = 25 °C, Pulse Width = 300 μSec, 2.0% Duty Cycle