DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. SESA-301-1B

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 ≤ 2%, Max. ≤ 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

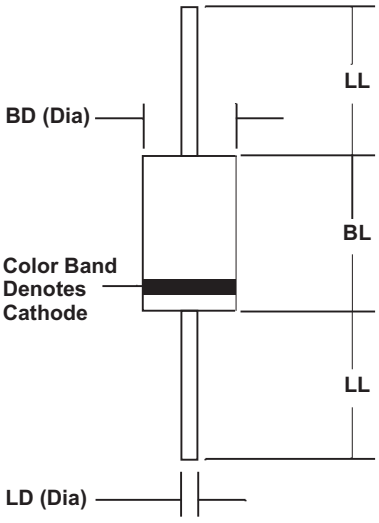
MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-27 PACKAGE

SERIES UFR300 - UFR310

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 300	UFR 301	UFR 302	UFR 303	UFR 304	UFR 305	UFR 306	UFR 308	UFR 310	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	300	400	500	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	350	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	300	400	500	600	800	1000	
Average Forward Rectified Current @ T_A = 55 °C	I_O	3									AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	160									
Maximum Forward Voltage at 3 Amps DC	V_{FM}	1.25					1.7				VOLTS
Maximum Average DC Reverse Current @ T_C = 25° C At Rated DC Blocking Voltage @ T_C = 125° C	I_{RM}	5 50									µA
Typical Thermal Resistance, Junction to Lead	$R_{\theta JA}$	20									°C/W
Typical Junction Capacitance (Note 1)	C_J	45									pF
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	50					75				nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150									°C

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

3.01 ufr300

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RATING & CHARACTERISTIC CURVES FOR SERIES UFR300 - UFR310

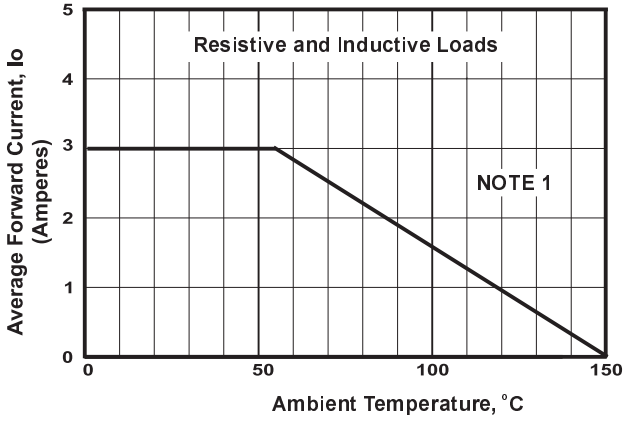


FIGURE 1. FORWARD CURRENT DERATING CURVE

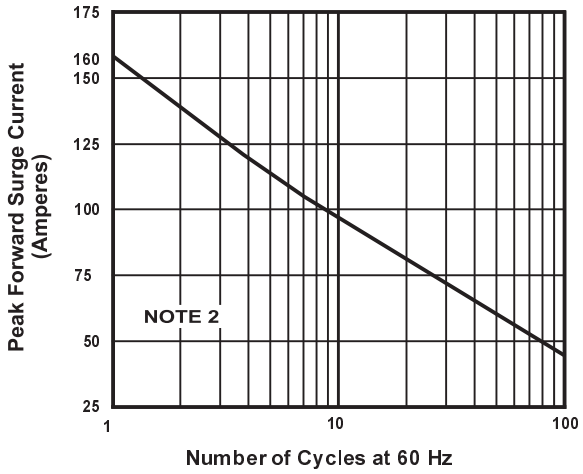


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

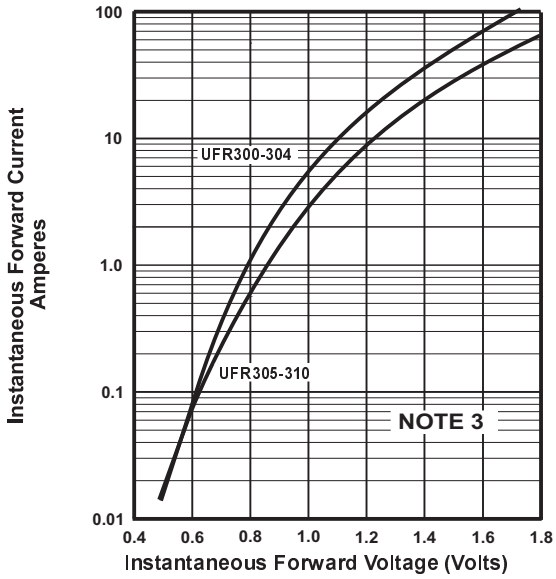


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

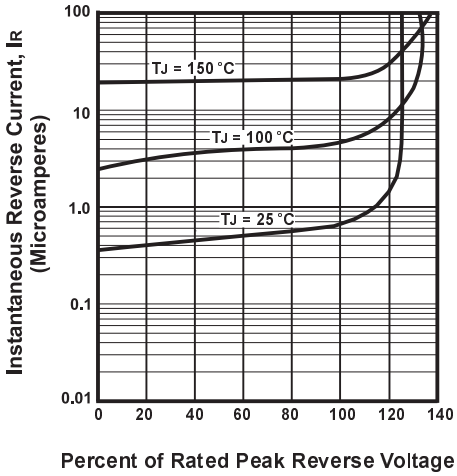


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

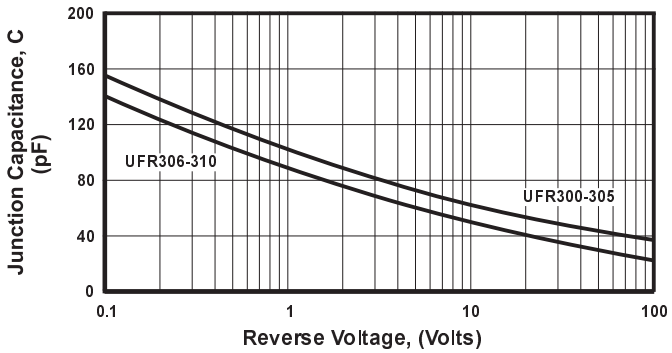


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

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

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