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. SEDR-3000-1B

30 AMP ULTRAFAST RECOVERY DIODES

FEATURES

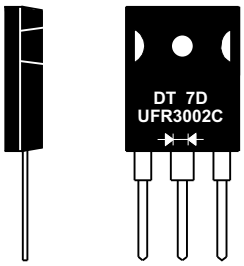
- Glass Passivated for high reliability/temperature performance
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- **RoHS COMPLIANT**

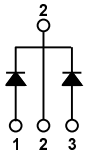
MECHANICAL DATA

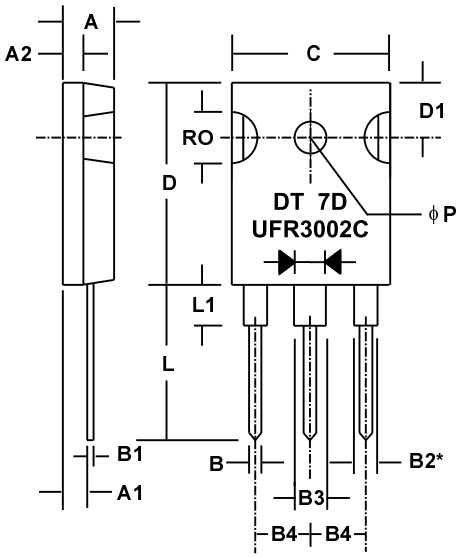
- Case: TO-247(TO-3P) molded epoxy (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diodes depicted on product
- Mounting Position: Any
- Weight: 0.2 Ounces (5.55 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-247AB (TO-3PAB) PACKAGE







*Applies to Pins 1 and 3

Sym	Minimum		Maximum	
	in	mm	in	mm
A	0.19	4.82	0.205	5.2
A1	0.087	2.21	0.102	2.6
A2	0.075	1.9	0.085	2.16
B	0.045	1.14	0.055	1.4
B1	0.022	0.56	0.032	0.81
B2	0.079	2.01	0.094	2.39
B3	0.116	2.95	0.126	3.2
B4			0.215	5.46
C	0.602	15.29	0.625	15.88
D	0.776	19.7	0.799	20.3
D1	0.209	5.31	0.224	5.69
L	0.559	14.2	0.582	14.8
L1	0.146	3.71	0.189	4.8
RO	0.209	5.3	0.224	5.7
P	0.13	3.3	0.145	3.7

TO-247AB (TO-3PAB)

SERIES UFR3001C - UFR3005C

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 3001C	UFR 3002C	UFR 3003C	UFR 3004C	UFR 3005C	
Maximum DC Blocking Voltage	V_{RM}	100	200	300	400	500	VOLTS
Maximum RMS Voltage	V_{RMS}	70	140	210	280	350	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	100	200	300	400	500	
Average Forward Rectified Current @ Tc = 100 °C	I_O	30					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	250		200			
Maximum Forward Voltage (per diode) at 15 Amps DC	V_{FM}	1.0		1.25			VOLTS
Maximum Average DC Reverse Current @ Tc = 25 °C At Rated DC Blocking Voltage @ Tc = 100 °C	I_{RM}	10 500					µA
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	2					°C/W
Typical Junction Capacitance (Note 1)	C_J	150					pF
Maximum Reverse Recovery Time (I_F=15.0A, di/dt=50A/µS, T_J=25°C)	T_{RR}	50		60			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.

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30 AMP ULTRAFAST RECOVERY DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES UFR3001C - UFR3005C

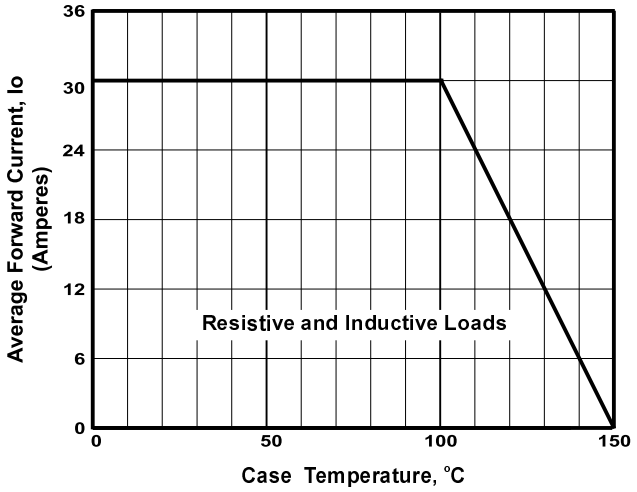

FIGURE 1. FORWARD CURRENT DERATING CURVE

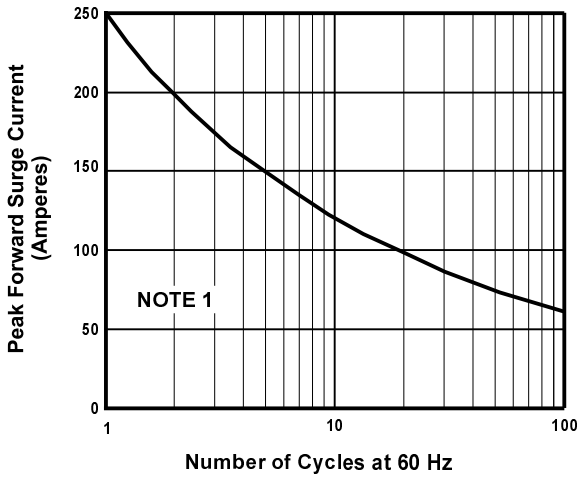

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

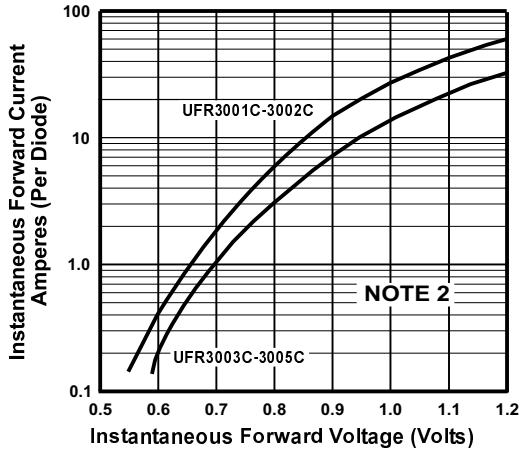

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

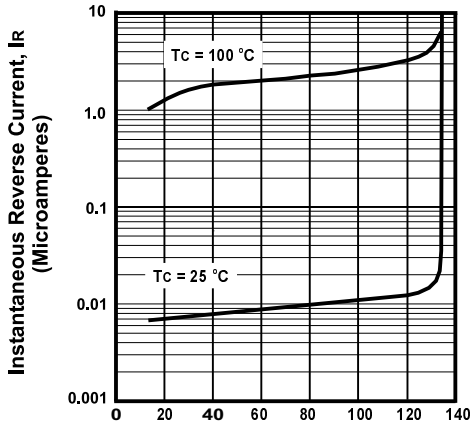

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

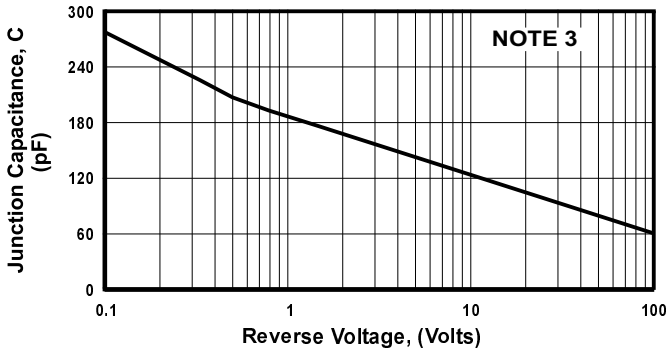

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(2) T_J = 25 °C, Pulse Width = 300 µSec, 2.0% Duty Cycle

(3) T_C = 25 °C, f = 1 MHz, V_{SIG} = 50 mV P-P

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