DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

UFR100-UFR110

1A ULTRA FAST RECOVERY RECTIFIERS

FEATURES

- Available as “HR” (high reliability) screened per MIL-PRF-19500, JANTX level. Add “HR” suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding “-PBF” suffix.

MAXIMUM RATINGS and ELECTRICAL CHARACTERISTICS @ 25°C unless otherwise noted

Rating	Symbol	UFR100	UFR101	UFR102	UFR103	UFR104	UFR105	UFR106	UFR108	UFR110	Unit
Peak repetitive reverse voltage **Working peak reverse voltage** **DC blocking voltage**	V_{RRM} V_{RWM} V_R	50	100	200	300	400	500	600	800	1000	V
RMS reverse voltage	$V_{R(RMS)}$	35	70	140	210	280	350	420	560	700	V
Average rectified forward current (Rated V_R)	I_O	1 @ T_A = 55°C									A
Non-repetitive peak surge current (8.3ms, single half sine wave superimposed on rated load)	I_{FSM}	35									A
Maximum forward voltage at 1A DC	V_{FM}	1.25						1.7			V
Maximum average DC reverse current @ rated DC blocking voltage **T_C = 25°C** **T_C = 125°C**	I_{RM}	2.0 50									µA
Operating and storage junction temperature range	T_J, T_{stg}	-65 to +150									°C
Typical thermal resistance Junction to ambient	$R_{\Theta JA}$	50									°C/W
Typical junction capacitance (1)	C_J	15									pF
Maximum reverse recovery time (I_F = 0.5A, I_R = 1A, I_{RR} = 0.25A)	t_{rr}	50						75			ns

(1) Measured at 1MHz and an applied reverse voltage of 4V.

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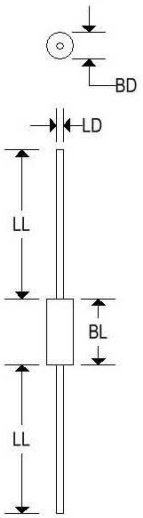
MECHANICAL CHARACTERISTICS

Case:	DO-41
Marking:	Alpha-Numeric
Polarity:	Cathode Band



	DO-41			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	-	0.107	-	2.720
BL	-	0.205	-	5.207
LD	0.028	0.034	0.711	0.864
LL	1.000	-	25.400	-

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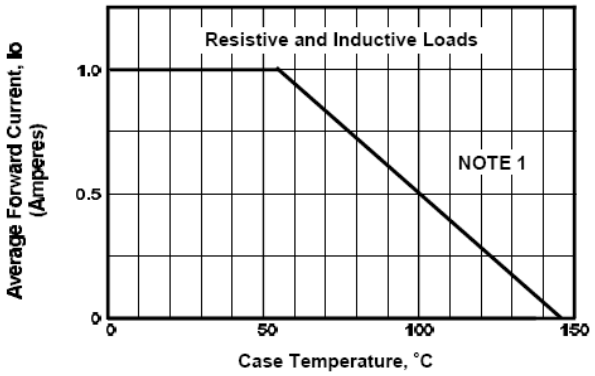

FIGURE 1. FORWARD CURRENT DERATING CURVE

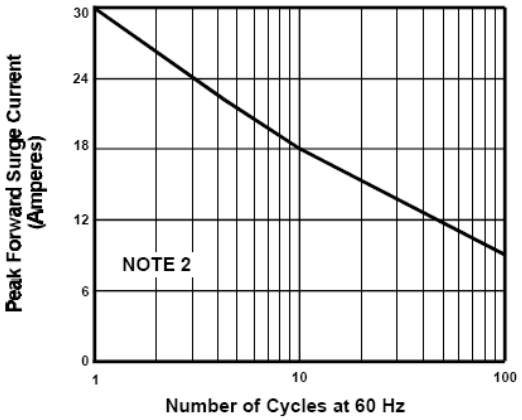

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

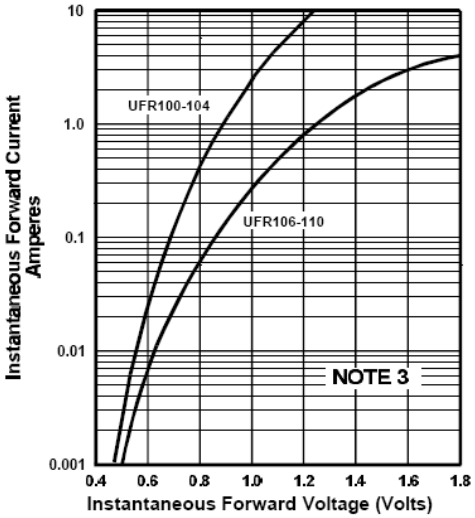

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

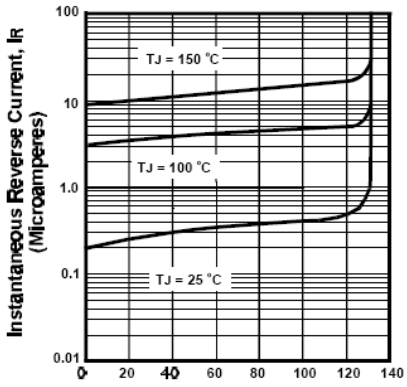

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

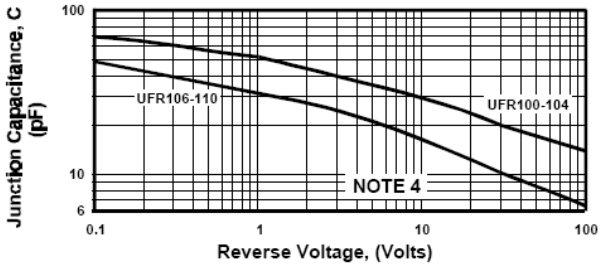

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

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, 1.0% Duty Cycle

(4) T_J =25°C, f = 1.0 MHz, 2% Duty Cycle.