

DIGITRON SEMICONDUCTORS

UFR100-UFR110

1A ULTRAFAST RECOVERY RECTIFIER

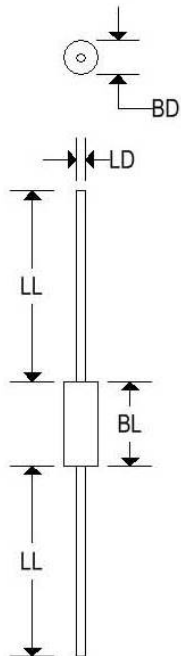
MAXIMUM RATINGS and ELECTRICAL CHARACTERISTICS @ 25°C unless otherwise noted

Rating	Symbol	UFR									Unit
		100	101	102	103	104	105	106	108	110	
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 @ $T_A = 55^\circ\text{C}$									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 $T_C = 25^\circ\text{C}$ $T_C = 125^\circ\text{C}$	I_{RM}					2.0 50					μA
Operating and storage junction temperature range	T_J, T_{stg}	-65 to +150									$^\circ\text{C}$
Typical thermal resistance Junction to ambient	$R_{\theta JA}$	50									$^\circ\text{C/W}$
Typical junction capacitance ⁽¹⁾	C_J	15									pF
Maximum reverse recovery time ($I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$)	t_{rr}	50				75					ns

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

MECHANICAL CHARACTERISTICS

Case	DO-41
Marking	Body painted, 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	-

Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).

Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number

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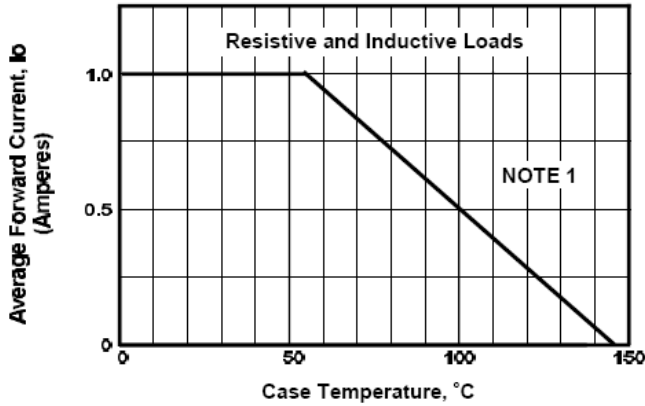


FIGURE 1. FORWARD CURRENT DERATING CURVE

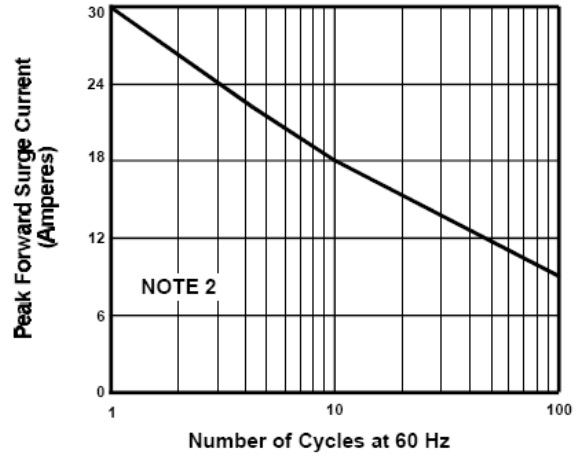


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

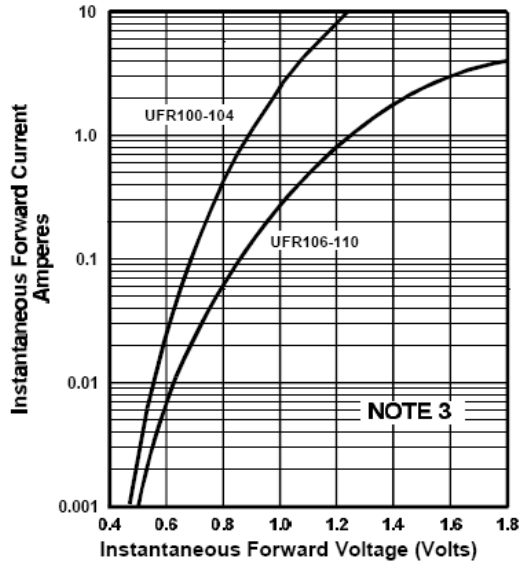


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

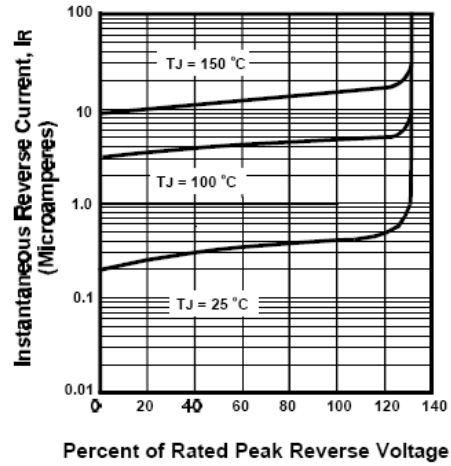


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

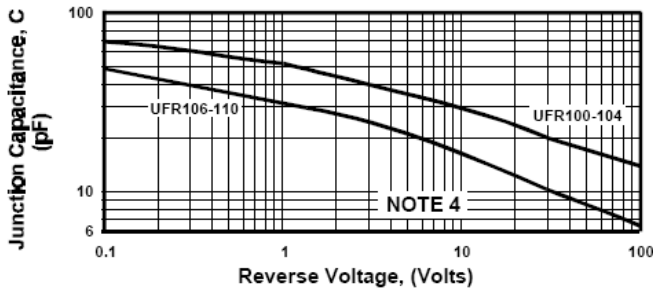


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

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) $T_J = 25^\circ\text{C}$, Pulse Width = 300 μSec , 1.0% Duty Cycle
- (4) $T_J = 25^\circ\text{C}$, $f = 1.0\text{ MHz}$, 2% Duty Cycle.