

T-03-17

# IN3879-IN3883 SERIES

## Fast Recovery Rectifier 6 Amp Silicon Diode

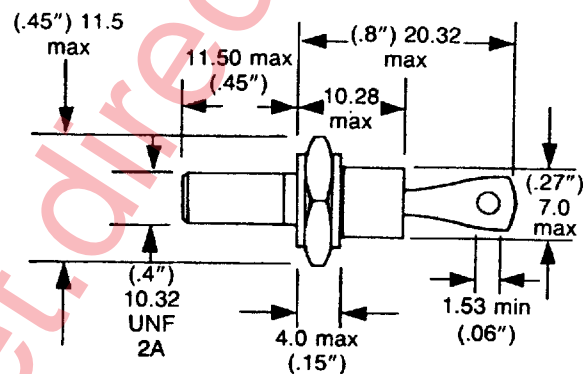
### FEATURES

- Hermetically sealed D04
- Recovery time 200 nS
- Low overshoot current
- Normal and reverse polarity

### MECHANICAL DATA

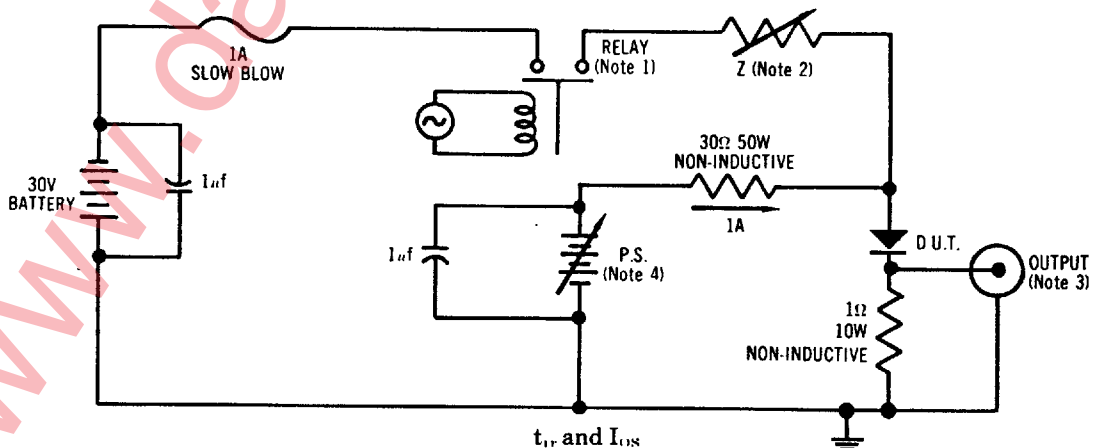
- Case: Industry standard D04 7/16th Hex stud with 10-32 UNF threads, welded, hermetically sealed metal and glass
- Finish: All external surfaces are corrosion resistant and terminal solderable
- Weight: 7.5 grams
- Mounting Position: Any
- Polarity: Standard polarity: cathode to stud.  
Reverse polarity: anode to stud (suffix R)
- Mounting Hardware: Available on request

### METAL D04



Case Outline SO10A (DO. 4) diam in mm (inch)

### TEST CIRCUIT FOR RECOVERY TIME





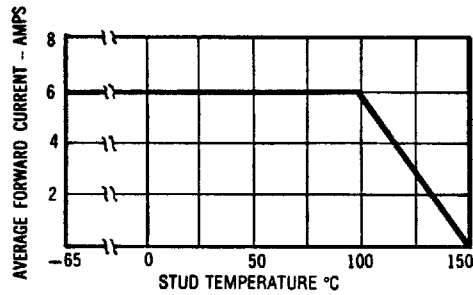
**Electrical Characteristics @ 25°C, unless otherwise specified**

JEDEC Type Number	Rated DC Blocking Voltage	Peak Reverse Voltage	Average Forward Current	Maximum Forward Voltage	Maximum Reverse Current			
					25°C		100°C	
					$V_R$	$I_R$	$I_R$	
	-65°C to 100°C	-65°C to 100°C	-65°C to 100°C	$I_F = 6A$	$I_O = 6A @ V_{RM}$ -65°C to 100°C	$V_R = \text{Rated Value}$	@ $V_{RM}$ $I_O = 6A$ $f = 60Hz$	
	Volts	Volts	Amps	Volts	Volts	$I_R$	$I_R$	$I_R$ (Ave)
						$\mu A$	mA	mA
1N3879	50	50	6	1.4	1.5	15	1.0	3.0
1N3880	100	100	6	1.4	1.5	15	1.0	3.0
1N3881	200	200	6	1.4	1.5	15	1.0	3.0
1N3882	300	300	6	1.4	1.5	15	1.0	3.0
1N3883	400	400	6	1.4	1.5	15	1.0	3.0

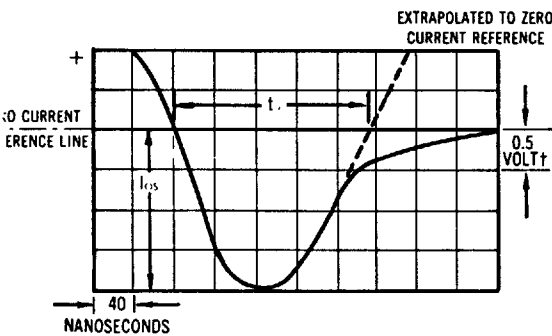
**Switching Characteristics @ 25°C, unless otherwise specified**

JEDEC Type Number	Maximum Recovery Time	Maximum Current Overshoot
	See Fig. 1, 2 & 3	
	$t_{rr}$	$I_{os}$
	nSec	Amps
1N3879	200	2.0
1N3880	200	2.0
1N3881	200	2.0
1N3882	200	2.0
1N3883	200	2.0

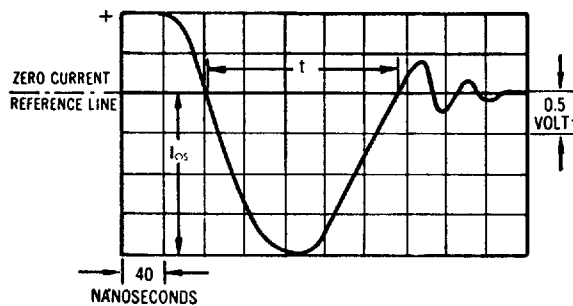
**DERATING CURVE**



**TYPICAL OSCILLOSCOPE PATTERNS OF RECOVERY**



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- NOTE 1** The relay is a make-before-break, wetted-mercury-contact type driven by a 60 Hz sine wave. Conduction time is 640  $\mu$ Sec and it is open approximately 7.7 mSec.
- NOTE 2** Z is a 3  $\Omega$ , 25 W rheostat adjusted for a resistance of 1.4  $\Omega$  from the relay to the anode. The inductance between the same points is 38  $\mu$ H.
- NOTE 3** Monitoring oscilloscope characteristics:  $t_r \leq 14nSec$ ,  $R_{in} = 9 M\Omega$ ,  $C_{in} \leq 12 pf$ ,  $L_{in} \leq 0.5 \mu H$ .
- NOTE 4** Power supply has an output impedance of 0.5  $\Omega$  from DC to 2kHz.

