

1N5186-1N5190

FAST RECOVERY RECTIFIERS DIODES

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

Peak Inverse Voltage	Type
100 V	1N5186
200 V	1N5187
400 V	1N5188
600 V	1N5190
Maximum Average D.C. Output Current @ $T_A = 25^\circ\text{C}$ $T_A = 150^\circ\text{C}$	3.0 A 0.7 A
Non-Repetitive Sinusoidal Surge Current (8.3ms)	80 A
Operating Temperature Range	-65 to + 175°C
Storage Temperature Range	-65 to + 200°C
Thermal Resistance	See Lead Temperature Derating Curve

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Type	Peak Inverse Voltage	Minimum Reverse Breakdown Voltage @ 100 μA	Peak Forward Voltage @ 9A (pk) (8.3 ms)		Maximum Reverse DC Current @ PIV	
			Min	Max	25°C	100°C
1N5186	100 V	120 V	0.9 V	1.5 V	2 μA	100 μA
1N5187	200 V	240 V				
1N5188	400 V	480 V				
1N5190	600 V	660 V				

Type	Reverse Recovery Time *	Capacitance @ $V_R = 0\text{ V}$, $f = 1\text{ MHz}$	Capacitance @ $V_R = 4\text{ V}$, $f = 1\text{ MHz}$
1N5186	150 ns	300 pF	200 pF
1N5187	200 ns	300 pF	170 pF
1N5188	250 ns	230 pF	120 pF
1N5190	400 ns	180 pF	90 pF

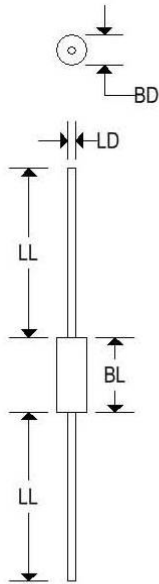
- Recovery time measured from $I_F = 0.5\text{ A}$ to $I_R = 1.0\text{ A}$, $I_{\text{REC}} = 0.25\text{ A}$

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MECHANICAL CHARACTERISTICS

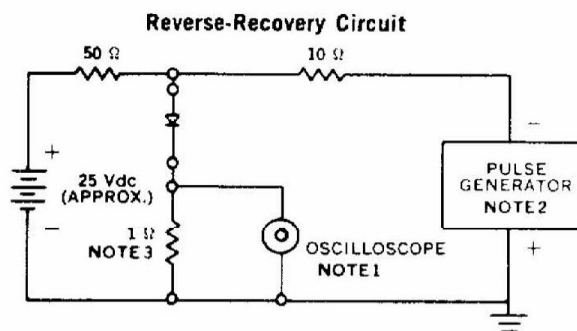
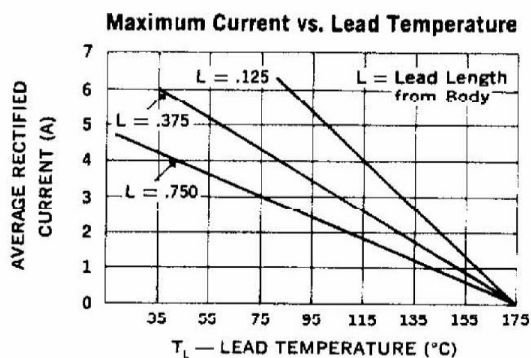
Case:	Digi B
Marking:	Body painted, alpha-numeric
Polarity:	Cathode band



	Digi B			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	-	0.135	-	3.429
BL	-	0.250	-	6.350
LD	0.038	0.042	0.965	1.067
LL	0.975	-	24.765	-

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NOTES:

1. Oscilloscope: Rise time $\leq 3\text{ns}$; input impedance = 50Ω .
2. Pulse Generator: Rise time $\leq 8\text{ns}$; source impedance 10Ω .
3. Current viewing resistor, non-inductive, coaxial recommended.

