DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

1N5614-1N5622

STANDARD 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. Part numbers listed indicate a tolerance of ±20% with guaranteed limits on only, VZ, IR and

MAXIMUM RATINGS

Rating	Value
Thermal resistance	38°C/W junction to lead at 3/8" lead length from body
Thermal impedance	4.5°C/W @ 10ms heating time
Average rectified forward current	1.0A @ T_A = 55°C and 0.75A @ TA = 100°C
Forward surge current	30A @ 8.3ms half sine
Solder temperatures	260°C for 10 s maximum
Junction and storage temperature	-65 to +200°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Part number	Working peak reverse voltage	Minimum breakdown voltage	Average rectified current[1]		Maximum forward voltage		Maximum reverse current		Maximum surge current[2]	Reverse recovery[3]
	V_{RWM}	V_{BR} @ 50µA	I_O @ T_A		V_F @ 3A		I_R @ V_{RWM}		I_{FSM}	t_{rr}
	Volts	Volts	Amps		Volts		µA		Amps	µs
			55°C	100°C	Min	Max	25°C	100°C		
1N5614	200	220	1.00	0.750	0.8	1.30	0.5	25	30	2.0
1N5616	400	440	1.00	0.750	0.8	1.30	0.5	25	30	2.0
1N5618	600	660	1.00	0.750	0.8	1.30	0.5	25	30	2.0
1N5620	800	880	1.00	0.750	0.8	1.30	0.5	25	30	2.0
1N5622	1000	1100	1.00	0.750	0.8	1.30	0.5	25	30	2.0

Note 1: From 1 Amp at T_A = 55°C, derate linearly at 5.56mA/°C to 0.75 Amp at T_A = 100°C, from T_A = 100°C derate linearly at 7.5mA/°C to 0 Amps at T_A = 200°C. These ambient ratings are for PC boards where thermal resistance from mounting point to ambient is sufficiently controlled where $T_{J(max)}$ does not exceed 175°C.

Note 2: T_A = 100°C, f = 60Hz, IO = 750mA for ten 8.3ms surges @ 1 minute intervals.

Note 3: I_F = 0.5A, I_{RM} = 1A, $I_{R(REC)}$ = 0.250A

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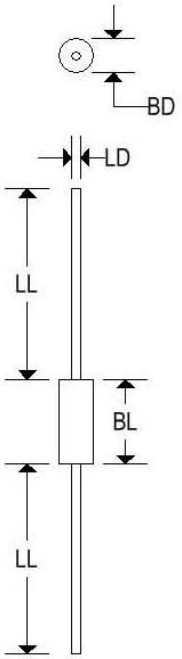
MECHANICAL CHARACTERISTICS

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



	Digi B			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	-	0.142	-	3.607
BL	-	0.250	-	6.350
LD	0.038	0.042	0.965	1.067
LL	0.975	-	24.765	-

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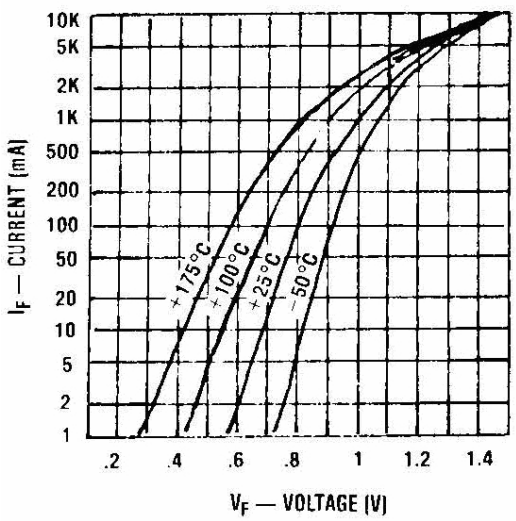
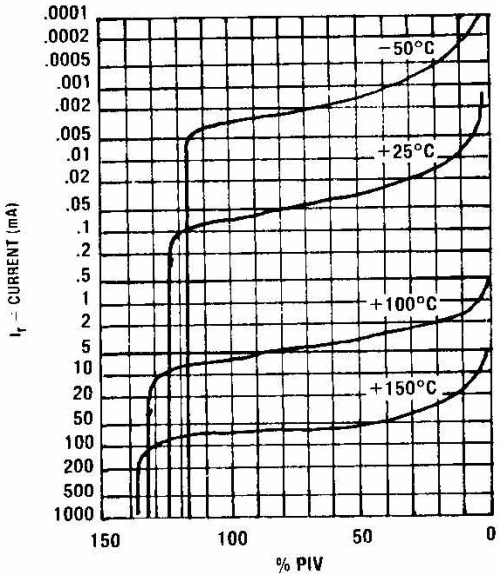
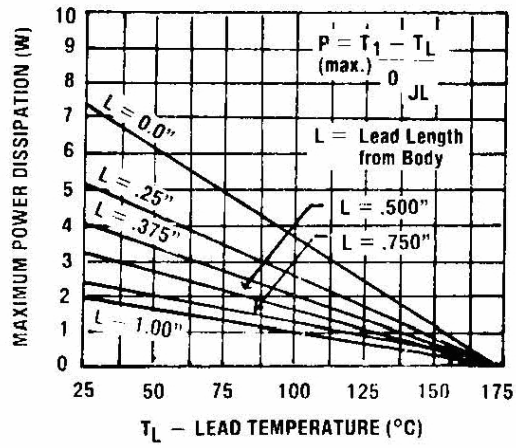


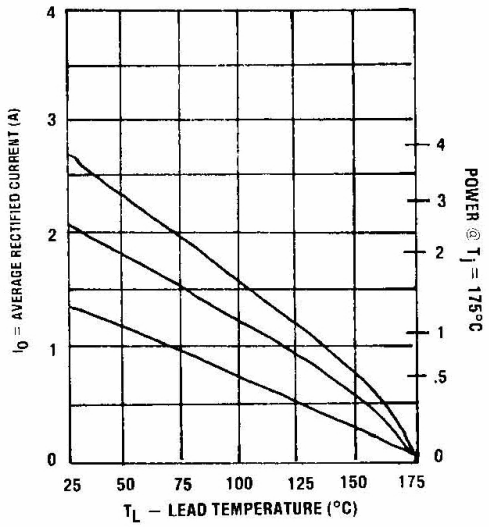
TYPICAL FORWARD VOLTAGE VS FORWARD CURRENT



TYPICAL REVERSE CURRENT VS PIV



MAXIMUM POWER DISSIPATION VS LEAD TEMPERATURE



MAXIMUM CURRENT VS LEAD TEMPERATURE