

1N6620-1N6625

ULTRA FAST 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

Part number	Reverse voltage	Operating current ⁽¹⁾	Operating current ⁽³⁾	Peak forward surge current ⁽²⁾	$R_{\theta JL}$ L = 0.375"	$R_{\theta JEC}$
	Volts	Amps	Amps	Amps	°C/W	°C/W
1N6620	200	2.0	1.2	20	38	20
1N6621	400	2.0	1.2	20	38	20
1N6622	600	2.0	1.2	20	38	20
1N6623	800	1.5	1.0	20	38	20
1N6624	900	1.5	1.0	20	38	20
1N6625	1000	1.5	1.0	15	38	20

Operating Temperature: -65°C to +175°C

Storage Temperature: -65°C to +200°C

Note 1: $T_L = +55^\circ\text{C}$, L= .375 inch for axial parts. Derate linearly at 0.80%/°C for $T_L > +55^\circ\text{C}$.

Note 2: Test pulse = 8.3ms, half sine wave.

Note 3: Independent of heatsinking.

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

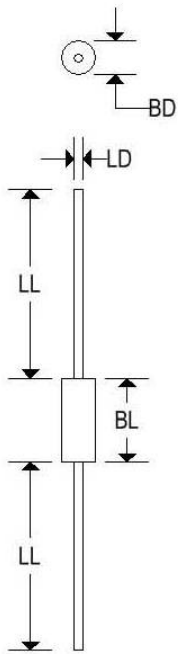
Part number	Min. Breakdown Voltage V_R $I_R = 50\mu\text{A}$	Max. Forward Voltage $V_F @ I_F$		Max. D.C. Reverse Current @ Rated Reverse Voltage I_R		Max. Reverse Recovery Time t_{rr} (Note 1)	Max. Junction Capacitance C_j $V_R = 10\text{V}$	Peak Recovery Current $I_{RM(rec)}$ $I_F = 2\text{A}$ 100A/ μs	Max. Forward Recovery Voltage V_{FRM} $I_F = 0.5\text{A}$ $t_r = 12\text{ns}$
				$T_A = 25^\circ\text{C}$	$T_A = 150^\circ\text{C}$				
	Volts	Volts @ Amps	Volts @ Amps	μA	μA	ns	pF	Amps	Volts
1N6620	220	1.40 @ 1.2	1.60 @ 2.0	0.5	150	30	10	3.5	12
1N6621	440	1.40 @ 1.2	1.60 @ 2.0	0.5	150	30	10	3.5	12
1N6622	660	1.40 @ 1.2	1.60 @ 2.0	0.5	150	30	10	3.5	12
1N6623	880	1.55 @ 1.0	1.80 @ 1.5	0.5	150	50	10	4.2	18
1N6624	990	1.55 @ 1.0	1.80 @ 1.5	0.5	150	50	10	4.2	18
1N6625	1100	1.75 @ 1.0	1.95 @ 1.5	1.0	200	60	10	5.0	30

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MECHANICAL CHARACTERISTICS

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



	Digi A			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	-	0.095	-	2.413
BL	-	0.180	-	4.572
LD	0.028	0.032	0.711	0.813
LL	0.700	-	17.800	-

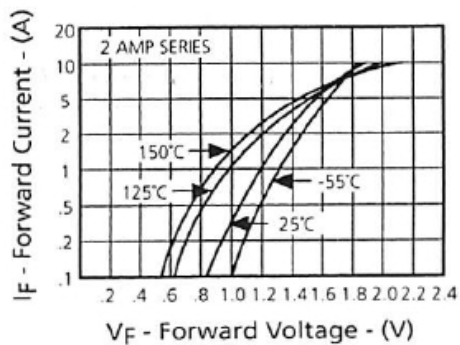


FIGURE 1
Typical Forward Current
vs
Forward Voltage

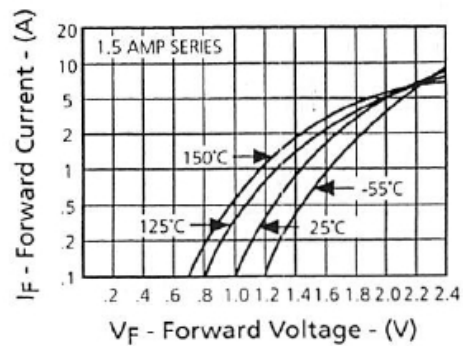


FIGURE 2
Typical Forward Current
vs
Forward Voltage

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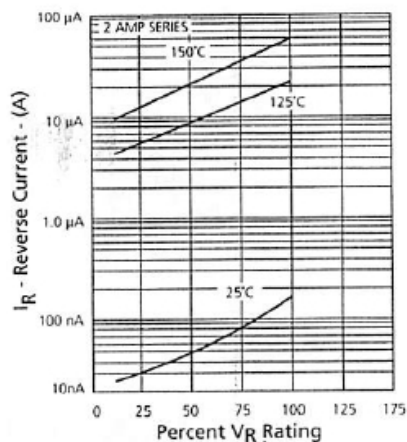


FIGURE 3
Typical Reverse Current vs.
Applied Reverse Voltage

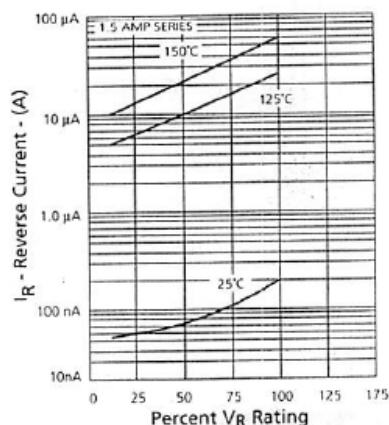


FIGURE 4
Typical Reverse Current vs.
Applied Reverse Voltage

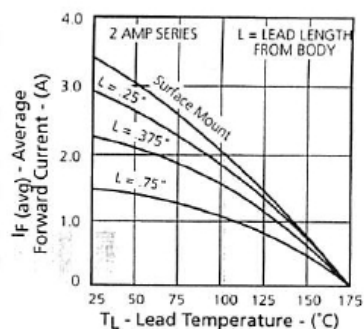


FIGURE 5
Average Forward Current vs.
Lead Temperature (50% Duty Cycle, Square Wave)

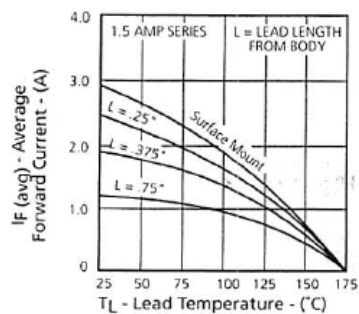


FIGURE 6
Average Forward Current vs.
Lead Temperature (50% Duty Cycle, Square Wave)

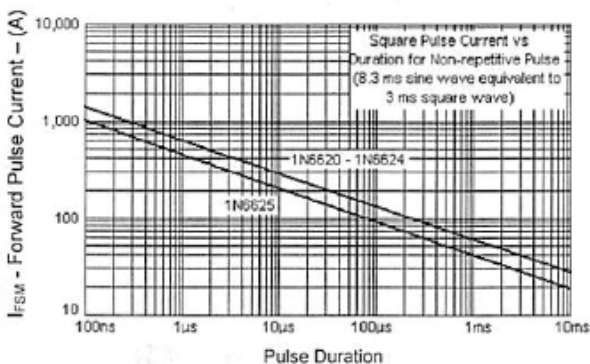


FIGURE 7
Forward Pulse Current vs.
Pulse Duration

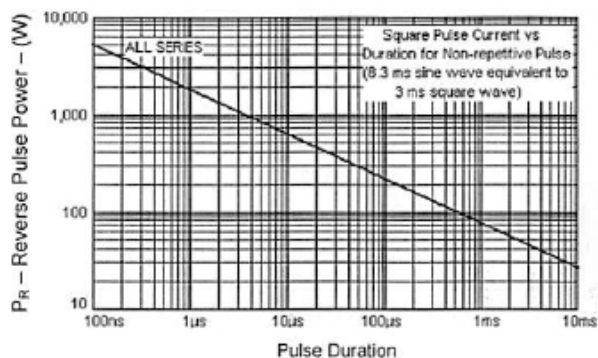


FIGURE 8
Reverse Pulse Power vs.
Pulse Duration