

# 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 <sup>(1)</sup>	Operating current <sup>(3)</sup>	Peak forward surge current <sup>(2)</sup>	R <sub>θJL</sub> L = 0.375"	R <sub>θJC</sub>
	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<sub>L</sub> = +55°C, L = .375 inch for axial parts. Derate linearly at 0.80%/°C for T<sub>L</sub> > +55°C.

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

Note 3: Independent of heatsinking.

### ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise specified)

Part number	Min. Breakdown Voltage V <sub>R</sub> I <sub>R</sub> = 50μA	Max. Forward Voltage V <sub>F</sub> @ I <sub>F</sub>		Max. D.C. Reverse Current @ Rated Reverse Voltage I <sub>R</sub>		Max. Reverse Recovery Time t <sub>rr</sub> (Note 4)	Max. Junction Capacitance C <sub>J</sub> V <sub>R</sub> = 10V	Peak Recovery Current I <sub>RM(Rec)</sub> I <sub>F</sub> = 2A 100A/μs	Max. Forward Recovery Voltage V <sub>FRM</sub> I <sub>F</sub> = 0.5A t <sub>r</sub> = 12ns
				T <sub>A</sub> =25°C	T <sub>A</sub> =150°C				
				μA	μA				
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

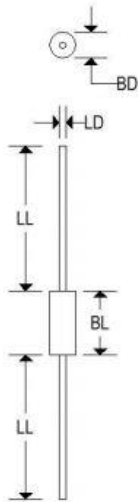
Note 4 : I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>R</sub> = 0.25A

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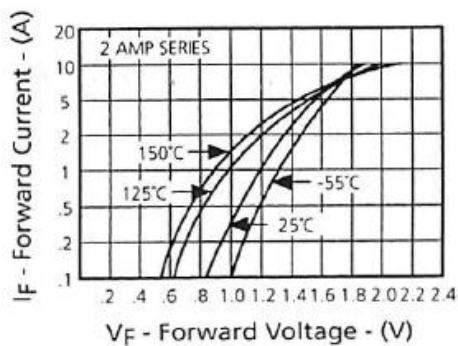
### MECHANICAL CHARACTERISTICS

<b>Case</b>	Digi A
<b>Marking</b>	Alpha-numeric
<b>Polarity</b>	Cathode band

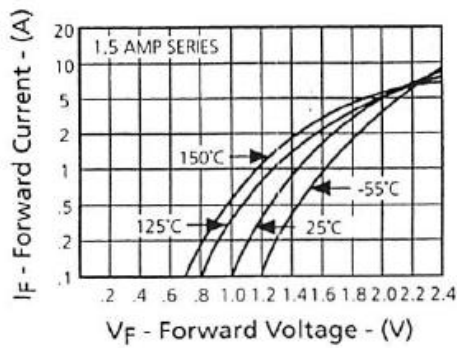


	Digi A			
	Inches		Millimeters	
	Min	Max	Min	Max
<b>BD</b>	0.060	0.095	1.524	2.413
<b>BL</b>	0.125	0.205	3.175	5.207
<b>LD</b>	0.026	0.033	0.660	0.838
<b>LL</b>	1.000	1.500	25.400	38.100

BL includes slugs and uncontrolled area of the leads



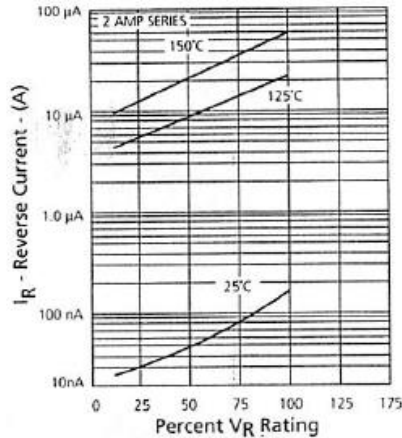
**FIGURE 1**  
Typical Forward Current  
vs  
Forward Voltage



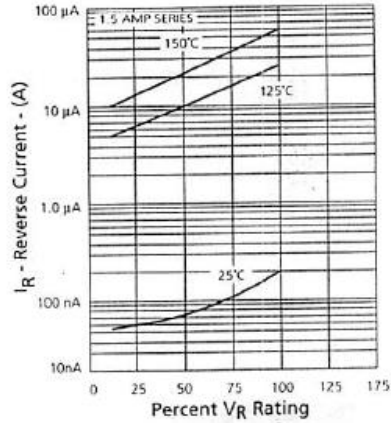
**FIGURE 2**  
Typical Forward Current  
vs  
Forward Voltage

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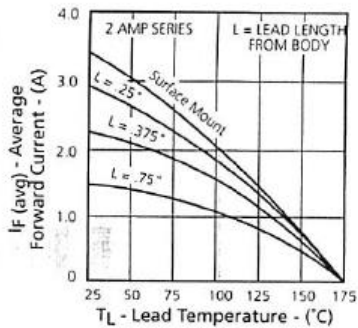
## ULTRA FAST RECTIFIERS



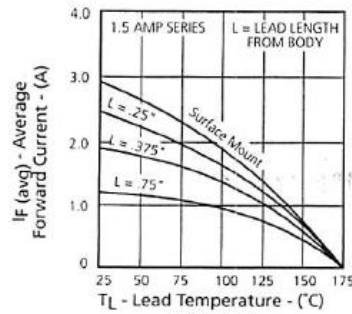
**FIGURE 3**  
Typical Reverse Current vs.  
Applied Reverse Voltage



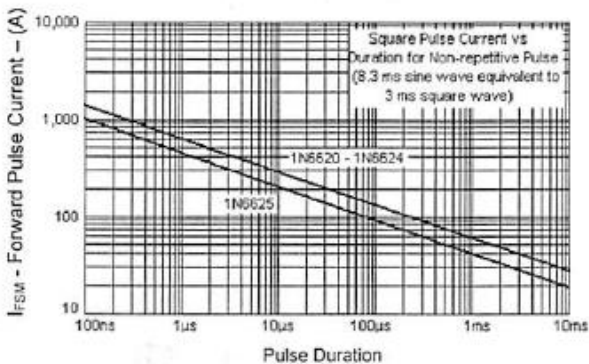
**FIGURE 4**  
Typical Reverse Current vs.  
Applied Reverse Voltage



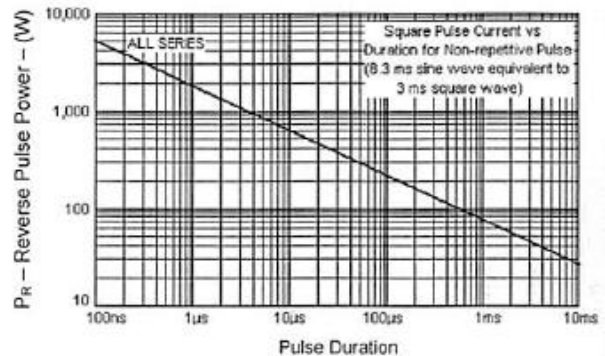
**FIGURE 5**  
Average Forward Current vs.  
Lead Temperature (50% Duty Cycle, Square Wave)



**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