

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

| Rating | Value |
|---|------------------------|
| Junction temperature | -65° to 150°C |
| Storage temperature | -65° to 175°C |
| Peak forward surge current @ 25°C ⁽¹⁾ 1N6626-1N6630 1N6631 | 75A 60A |
| Average rectified forward current @ T _L = 75°C ⁽²⁾ 1N6626-1N6628 1N6629-1N6631 | 2.3A 1.8A |
| Average rectified forward current at T _A = 25°C ⁽³⁾ 1N6626-1N6628 1N6629-1N6631 | 1.75A 1.40A |
| Thermal resistance L = 0.375" | 22°C/W |
| Capacitance at V _R = 10V | 40pF |
| Solder temperature | 260°C for 10 s maximum |

Note 1: Test pulse = 8.3 ms, half-sine wave.

Note 2: Derate linearly at 1.0%/°C for T_L > 75°.

Note 3: Derate linearly at 0.80%/°C for T_A > 25°C. This is typical for PC boards where thermal resistance from mounting point to ambient is sufficiently controlled where T_{J(max)} is not exceeded.

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

| Part number | Working peak reverse voltage | Minimum breakdown voltage | Max forward voltage | | Maximum reverse current | | Maximum reverse recovery time (low current) ⁽¹⁾ | Maximum reverse recovery time (high current) ⁽²⁾ | Peak Recovery Current ⁽²⁾ | Maximum forward Recovery Voltage |
|-------------|------------------------------|---------------------------|---------------------------------|------------|-----------------------------------|-----------------------|--|---|--------------------------------------|--|
| | V _{RWM} | V _R | V _F @ I _F | | I _R @ V _{RWM} | | t _{rr} | t _{rr} | I _{RM (rec)} | V _{FRM} |
| | | I _R = 50μA | | | T _A =25°C | T _A =150°C | | | I _F = 2A 100A/μS | I _F = 0.5A t _r = 12ns |
| | V | V | V@A | V@A | μA | μA | ns | ns | A | V |
| 1N6626 | 200 | 220 | 1.35V@2.0A | 1.50V@4.0A | 2.0 | 500 | 30 | 45 | 3.5 | 8 |
| 1N6627 | 400 | 440 | 1.35V@2.0A | 1.50V@4.0A | 2.0 | 500 | 30 | 45 | 3.5 | 8 |
| 1N6628 | 600 | 660 | 1.35V@2.0A | 1.50V@4.0A | 2.0 | 500 | 30 | 45 | 3.5 | 8 |
| 1N6629 | 800 | 880 | 1.40V@1.4A | 1.70V@3.0A | 2.0 | 500 | 50 | 60 | 4.2 | 12 |
| 1N6630 | 900 | 990 | 1.40V@1.4A | 1.70V@3.0A | 2.0 | 500 | 50 | 60 | 4.2 | 12 |
| 1N6631 | 1000 | 1100 | 1.60V@1.4A | 1.95V@2.0A | 4.0 | 600 | 60 | 80 | 5.0 | 20 |

Note 1: Low Current Reverse Recovery Time Test Conditions I_F = 0.5A, I_{RM} = 1.0A, I_{R(REC)} = 0.25A.

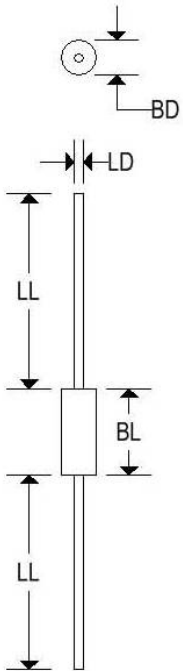
Note 2: High Current Reverse Recovery Time Test Conditions I_F = 2.0A, 100A/μS, MIL-STD-750, METHOD 4031, CONDITION D.

1N6626-1N6631

ULTRA FAST RECTIFIERS

MECHANICAL CHARACTERISTICS

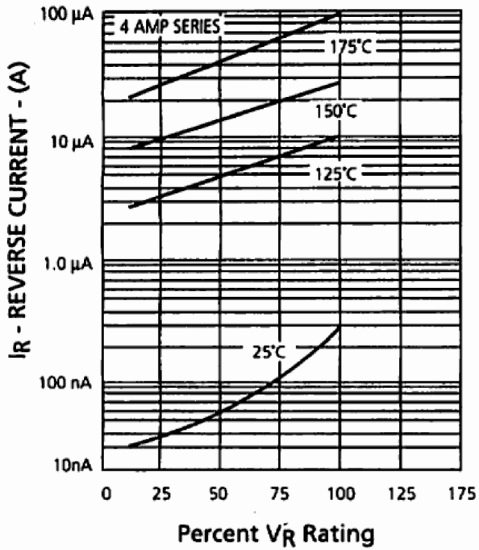
| | |
|------------------|-----------------------------|
| Case: | Digi J |
| Marking: | Body painted, Alpha-numeric |
| Polarity: | Cathode band |



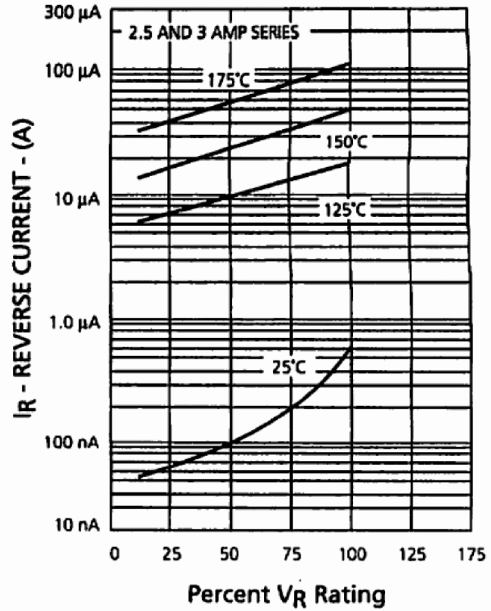
| | Digi J | | | |
|----|--------|-------|-------------|--------|
| | Inches | | Millimeters | |
| | Min | Max | Min | Max |
| BD | 0.115 | 0.135 | 2.920 | 3.429 |
| BL | 0.130 | 0.300 | 3.300 | 7.620 |
| LD | 0.037 | 0.042 | 0.940 | 1.070 |
| LL | 0.900 | 1.300 | 22.860 | 33.020 |

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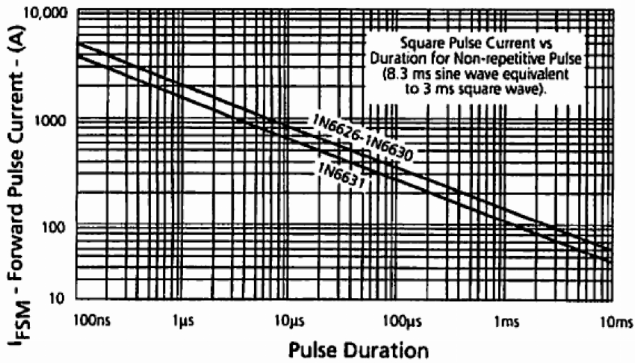
ULTRA FAST RECTIFIERS



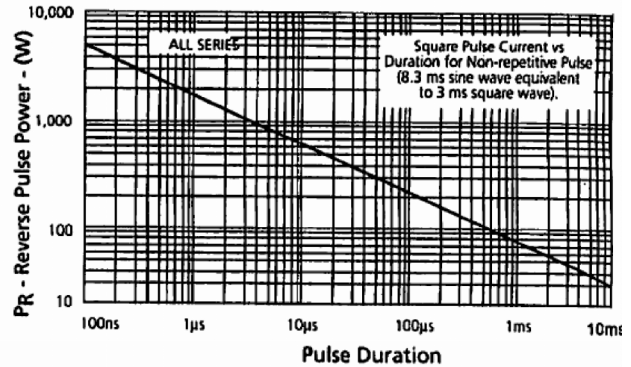
Typical Reverse Current vs.
Applied Reverse Voltage



Typical Reverse Current vs.
Applied Reverse Voltage



Forward Pulse Current vs.
Pulse Duration



Reverse Pulse Power vs.
Pulse Duration