

Semiconductors
High-reliability discrete products and engineering services since 1977

## 1N5550-1N5554

## 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 ( $\mathrm{Sn} / \mathrm{Pb}$ plating), standard, and as RoHS by adding "-PBF" suffix.


## MAXIMUM RATINGS

| Junction Temperature: | $-65^{\circ} \mathrm{C}$ to $+200^{\circ} \mathrm{C}$ |
| :--- | :---: |
| Storage Temperature: | $-65^{\circ} \mathrm{C}$ to $+175^{\circ} \mathrm{C}$ |
| Thermal Resistance: | $22^{\circ} \mathrm{C} / \mathrm{W}$ junction to lead @ $3 / 8^{\prime \prime}$ lead length from body |
| Thermal Impedance: | $1.5^{\circ} \mathrm{C} / \mathrm{W}$ ms heating time |
| Average Rectified Forward Current ( $\mathrm{I}_{\mathrm{o}}$ ): | $5 \mathrm{Amps} @ \mathrm{~T}_{\mathrm{L}}=55^{\circ} \mathrm{C}$ (see Note 1) |
| Forward Surge Current (8.3 ms half sine): | 100 Amps |
| Solder Temperatures: | $260^{\circ} \mathrm{C}$ for 10 s (maximum) |

ELECTRICAL CHARACTERISTICS ( $\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}$ unless otherwise specified)

| Type | Minimum Breakdown Voltage$\mathrm{V}_{\mathrm{BR}} @ 50 \mu \mathrm{~A}$ | Working Peak Reverse Voltage $V_{\text {RWM }}$ | Average <br> Rectified <br> Current $\begin{gathered} \mathrm{I}_{\mathrm{O} 1} @ \\ \mathrm{~T}_{\mathrm{L}}=+55^{\circ} \mathrm{C} \end{gathered}$ <br> Note 1 | $\begin{gathered} \text { Average } \\ \text { Rectified } \\ \text { Current } \\ \mathrm{I}_{\mathrm{O} 2} @ \\ \mathrm{~T}_{\mathrm{A}}=+55^{\circ} \mathrm{C} \\ \text { Note } 2 \end{gathered}$ | Forward Voltage$\mathbf{V}_{\mathrm{F}} @ 9 \mathrm{~A}(\mathrm{pk})$ |  | Maximum <br> Reverse Current $\mathrm{I}_{\mathrm{R}} @ \mathrm{~V}_{\mathrm{RWM}}$ | Reverse Recovery $t_{\text {rr }}$ Note 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Min. | Max. |  |  |
|  | VOLTS | VOLTS | AMPS | AMPS | VOLTS | VOLTS | $\mu \mathrm{A}$ | $\mu \mathrm{s}$ |
| 1N5550 | 220 | 200 | 5 | 3 | 0.6V(pk) | 1.2 V (pk) | 1.0 | 2.0 |
| 1N5551 | 440 | 400 | 5 | 3 | 0.6 V (pk) | 1.2 V (pk) | 1.0 | 2.0 |
| 1N5552 | 660 | 600 | 5 | 3 | 0.6 V (pk) | 1.2 V (pk) | 1.0 | 2.0 |
| 1N5553 | 880 | 800 | 5 | 3 | 0.6 V (pk) | 1.3 V (pk) | 1.0 | 2.0 |
| 1N5554 | 1100 | 1000 | 5 | 3 | 0.6 V (pk) | 1.3 V (pk) | 1.0 | 2.0 |

Note 1: Rated at $\mathrm{T}_{\mathrm{L}}=55^{\circ} \mathrm{C}$ at $\mathrm{L}=0.375^{\prime \prime}$ from body. Derate linearly at $41.6 \mathrm{~mA} /{ }^{\circ} \mathrm{C}$ above $\mathrm{T}_{\mathrm{L}}=55^{\circ} \mathrm{C}$.
Note 2: Derate linearly at $25 \mathrm{~mA} /{ }^{\circ} \mathrm{C}$ above $\mathrm{T}_{\mathrm{A}}=55^{\circ} \mathrm{C}$. This rating is typical for PC boards where thermal resistance from mounting point to ambient is sufficiently controlled where $\mathrm{T}_{\mathrm{J}(\mathrm{MAX})}$ rating is not exceeded.
Note 3: $\mathrm{I}_{\mathrm{F}}=0.5 \mathrm{~A}, \mathrm{I}_{\mathrm{RM}}=1.0 \mathrm{~A}, \mathrm{I}_{\mathrm{R}(\mathrm{REC})}=.250 \mathrm{~A}$

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MECHANICAL CHARACTERISTICS

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



|  | rigi $Y$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Inches |  | Millimeters |  |
|  | Min | Max | Min | Max |
| BD | 0.115 | 0.180 | 2.920 | 4.570 |
| BL | 0.130 | 0.300 | 3.300 | 7.620 |
| LD | 0.036 | 0.042 | 0.920 | 1.070 |
| LL | 0.900 | 1.300 | 22.860 | 33.020 |



