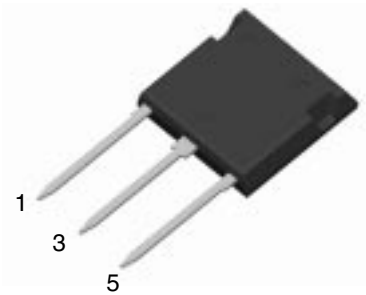
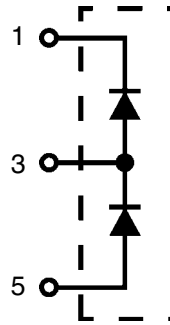


# Dual HiPerFRED™ Epitaxial Diode

in ISOPLUS i4-PAC™

## DSEE 55-24N1F

$V_{RRM} = 2400\text{ V}$   
 $I_{F(AV)M} = 55\text{ A}$   
 $t_{rr} = 220\text{ ns}$



### Rectifier Bridge

| Symbol        | Conditions   | Maximum Ratings |    |
|---------------|--|-----------------|----|
| $V_{RRM}^{①}$ |  | 2400            | V  |
| $V_{RRM}$     |  | 1200            | V  |
| $I_{FAV}$     | $T_C = 90^\circ\text{C}$ ; sine $180^\circ$  | 53              | A  |
| $I_{F(AV)M}$  | $T_C = 90^\circ\text{C}$ ; $d = 0.5$ rectangular   | 55              | A  |
| $I_{FSM}$     | $T_{VJ} = 25^\circ\text{C}$ ; $t = 10\text{ ms}$ ; sine $50\text{ Hz}$                                 | 500             | A  |
| $E_{AS}$      | $I_{AS} = 16\text{ A}$ ; $L_{AS} = 180\text{ }\mu\text{H}$ ; $T_C = 25^\circ\text{C}$ ; non repetitive | 28              | mJ |
| $P_{tot}$     | $T_C = 25^\circ\text{C}$ (per diode)   | 200             | W  |

### Features

- HiPerFRED™ Epitaxial Diodes
  - fast and soft reverse recovery – low switching losses
  - avalanche rated
  - low leakage current
- ISOPLUS i4-PAC™ package
  - isolated back surface
  - low coupling capacity between pins and heatsink
  - enlarged creepage towards heatsink
  - enlarged creepage between pins
  - application friendly pinout
  - high reliability
  - industry standard outline

| Symbol               | Conditions   | Characteristic Values<br>( $T_{VJ} = 25^\circ\text{C}$ , unless otherwise specified) |      |          |
|----------------------|--|--|------|----------|
|                      |  | min.   | typ. | max.     |
| $V_F$                | $I_F = 40\text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$<br>$T_{VJ} = 125^\circ\text{C}$                                  | 2.0  | 2.5  | V        |
|                      |  | 1.5  |      | V        |
| $I_R$                | $V_R = V_{RRM}$ ; $T_{VJ} = 25^\circ\text{C}$<br>$T_{VJ} = 125^\circ\text{C}$                                      | 1  | 1    | mA<br>mA |
| $I_{RM}$<br>$t_{rr}$ | $I_F = 75\text{ A}$ ; $di_F/dt = -750\text{ A}/\mu\text{s}$ ; $T_{VJ} = 125^\circ\text{C}$<br>$V_R = 600\text{ V}$ | 79   |      | A        |
|                      |  | 220  |      | ns       |
| $R_{thJC}$           | (per diode)  |  | 0.63 | K/W      |

### Applications

- rectifiers
  - high frequency rectifiers, output rectifiers of switched mode power supplies
  - mains rectifiers with minimized emission of disturbances
- diodes in snubber networks
- high voltage diodes using the series connection in the component

Data according to IEC 60747 and refer to a single diode unless otherwise stated.

① Diodes connected in series

Data according to IEC 60747 and refer to a single diode unless otherwise stated.  
IXYS reserves the right to change limits, test conditions and dimensions.

**Component**

| Symbol     | Conditions                                     | Maximum Ratings |    |
|------------|--|-----------------|----|
| $T_{VJ}$   |  | -55...+150      | °C |
| $T_{stg}$  |  | -55...+125      | °C |
| $V_{ISOL}$ | $I_{ISOL} \leq 1 \text{ mA}; 50/60 \text{ Hz}$ | 2500            | V~ |
| $F_c$      | mounting force with clip                       | 20...120        | N  |

| Symbol        | Conditions  | Characteristic Values |      |      |
|---------------|---|-----------------------|------|------|
|               |   | min.                  | typ. | max. |
| $C_p$         | coupling capacity between shorted pins and mounting tab in the case |                       | 40   | pF   |
| $d_s, d_A$    | pin - pin   | 5.5                   |      | mm   |
| $d_s, d_A$    | pin - backside metal  | 5.5                   |      | mm   |
| $R_{thCH}$    | with heatsink compound  |                       | 0.15 | K/W  |
| <b>Weight</b> |   |                       | 9    | g    |

**Dimensions in mm (1 mm = 0.0394")**
