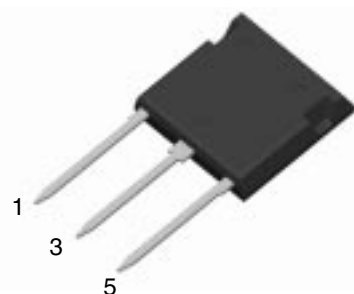
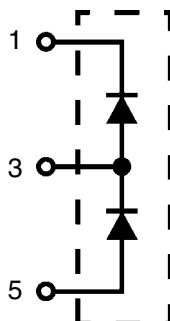


# Dual HiPerFRED™ Epitaxial Diode in ISOPLUS i4-PAC™

DSEE 55-24N1F

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



## 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°	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 ms; sine 50 Hz	500	A
$E_{AS}$	$I_{AS} = 16 \text{ A}$ ; $L_{AS} = 180 \mu\text{H}$ ; $T_C = 25^\circ\text{C}$ ; non repetitive	28	mJ
$P_{tot}$	$T_C = 25^\circ\text{C}$ (per diode)	200	W

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

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

① Diodes connected in series

## 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

## 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.  
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
Weight			9	g

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