

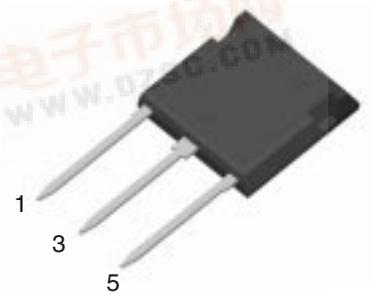
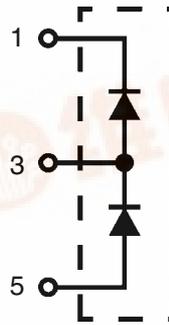


Dual HiPerFRED™ Epitaxial Diode

DSEE 55-24N1F

in ISOPLUS i4-PAC™

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



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°	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

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 ($T_{VJ} = 25^\circ\text{C}$, 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	2.5	V
		1.5		V
I_R	$V_R = V_{RRM}^{①}$; $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$		1	mA mA
I_{RM}	$I_F = 75\text{ A}$; $di_F/dt = -750\text{ A}/\mu\text{s}$; $T_{VJ} = 125^\circ\text{C}$ $V_R = 600\text{ V}$	79		A
t_{rr}		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

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")
