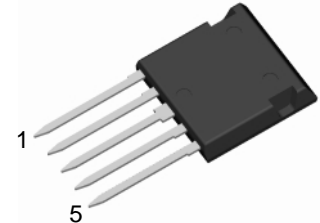
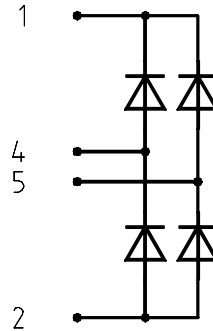


Fast Single Phase Rectifier Bridge

in ISOPLUS i4-PAC™

FBE 22-06N1

 $V_{RRM} = 600 \text{ V}$
 $I_{D(AV)M} = 20 \text{ A}$
 $t_{rr} = 80 \text{ ns}$


Input Rectifier Bridge

Symbol	Conditions	Maximum Ratings	
V_{RRM}		600	V
I_{FAV}	$T_C = 90^\circ\text{C}$; sine 180° (per diode)	10	A
$I_{D(AV)M}$	$T_C = 90^\circ\text{C}$	20	A
I_{FSM}	$T_{VJ} = 25^\circ\text{C}$; $t = 10 \text{ ms}$; sine 50 Hz	40	A
E_{AS}	$I_{AS} = 0.9 \text{ A}$; $L_{AS} = 180 \mu\text{H}$; $T_C = 25^\circ\text{C}$; non repetitive	0.1	mJ
P_{tot}	$T_C = 25^\circ\text{C}$ (per diode)	35	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
 - enlarged creepage towards heatsink
 - 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	$I_F = 15 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$		2.0 1.5	V V
I_R	$V_R = V_{RRM}$; $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$		0.1	0.06 mA mA
I_{RM} t_{rr}	$I_F = 10 \text{ A}$; $di_F/dt = -400 \text{ A}/\mu\text{s}$; $T_{VJ} = 125^\circ\text{C}$ $V_R = 300 \text{ V}$		11 80	A ns
R_{thJC}	(per diode)			3.5 K/W

Applications

- high frequency rectifiers, output rectifiers of switched mode power supplies
- single phase mains rectifiers with minimized electromagnetic emissions
- power factor correction in conjunction with boost chopper (FID.../FMD... type)

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

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.
d_s, d_A	pin - pin	1.7		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")
