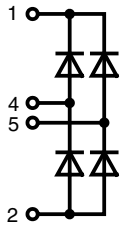
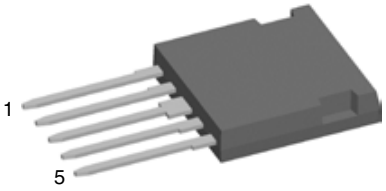
Fast Single Phase Rectifier Bridge
in ISOPLUS i4-PAC™

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





Pin 3 = not connected

Rectifier Bridge			
Symbol	**Conditions**	**Maximum Ratings**	
V_{RRM}		600	V
I_{dAV}	T_C = 90°C, sine 180° (per diode)	10	A
$I_{d(AV)M}$	T_C = 90°C	20	A
I_{FSM}	T_{VJ} = 25°C; t = 10 ms; sine 50 Hz	40	A
E_{AS}	I_{AS} = 0.9 A; L_{AS} = 180 µH; T_C = 25°C; non repetitive	0.1	mJ
P_{tot}	T_{VJ} = 25°C (per diode)	35	W

Symbol	**Conditions**		**Characteristic Values** typ.	max.	
V_F	I_F = 15 A;	T_{VJ} = 25°C	2.0	tbd	V
		T_{VJ} = 125°C	1.5		V
I_R	$V_R = V_{RRM}$;	T_{VJ} = 25°C		0.06	mA
		T_{VJ} = 125°C	0.1		mA
I_{RM}	I_F = 10 A; di_F/dt = -400 A/µs; T_{VJ} = 125°C		11		A
t_{rr}	V_R = 300 V		80		ns
R_{thJC}	(per diode)			3.5	K/W

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

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

Applications

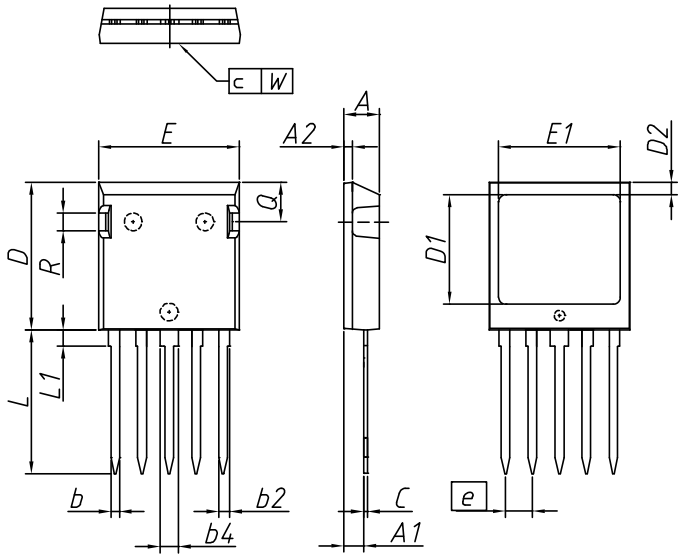
- high frequency rectifiers, output rectifiers of switched mode power supplies
- single phase mains rectifiers with minimized electromagnetic emissions
- power factor correction in conjunction with boost chopper (FID.../FMD... type)

IXYS reserves the right to change limits, test conditions and dimensions.

20081125a

Component			
Symbol	**Conditions**	**Maximum Ratings**	
T_{VJ}		-55...+150	°C
T_{stg}		-55...+125	°C
V_{ISOL}	$I_{ISOL} \leq 1$ mA; 50/60 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



DIM.	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	4,83	5,21	0,190	0,205
A1	2,59	3,00	0,102	0,118
A2	1,17	2,16	0,046	0,085
b	1,14	1,40	0,045	0,055
b1	1,47	1,73	0,058	0,068
b2	2,54	2,79	0,100	0,110
C	0,51	0,74	0,020	0,029
D	20,80	21,34	0,819	0,840
D1	14,99	15,75	0,590	0,620
D2	1,65	2,03	0,065	0,080
E	19,56	20,29	0,770	0,799
E1	16,76	17,53	0,660	0,690
e	3,81	BSC	0,15	BSC
L	19,81	21,34	0,780	0,840
L1	2,11	2,59	0,083	0,102
Q	5,33	6,20	0,210	0,244
R	2,54	4,57	0,100	0,180
W	-	0,10	-	0,004

Die konvexe Form des Substrates ist typ. < 0,05 mm über der Kunststoffoberfläche der Bauteilunterseite

The convex bow of substrate is typ. < 0.05 mm over plastic surface level of device bottom side