

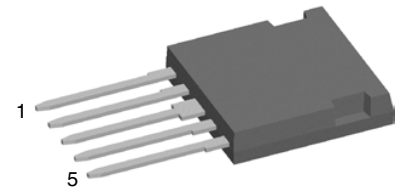
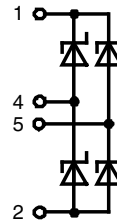
# Silicon Carbide Schottky Rectifier Bridge

in ISOPLUS i4-PAC™

$$V_{RRM} = 600 \text{ V}$$

$$I_{dAVM} = 6.6 \text{ A}$$

$$C_{junction} = 9 \text{ pF}$$



Rectifier Bridge			
Symbol	Conditions	Maximum Ratings	
$V_{RRM}$		600	V
$I_{FAV}$	$T_C = 90^\circ\text{C}$ ; sine $180^\circ$ (per diode)	3	A
$I_{D(AV)M}$	$T_C = 90^\circ\text{C}$	6.6	A
$I_{FSM}$	$T_C = 25^\circ\text{C}$ ; $t = 10 \text{ ms}$ ; sine 50 Hz	12	A
$P_{tot}$	$T_C = 25^\circ\text{C}$ (per diode)	19	W

Symbol	Conditions	Characteristic Values				
		(T <sub>VJ</sub> = 25°C, unless otherwise specified)				
		min.	typ.	max.		
$V_F$	$I_F = 4 \text{ A}$	$T_{VJ} = 25^\circ\text{C}$		1.7	2.0	V
		$T_{VJ} = 125^\circ\text{C}$		1.9		V
$I_R$	$V_R = V_{RRM}$	$T_{VJ} = 25^\circ\text{C}$			0.2	mA
		$T_{VJ} = 125^\circ\text{C}$		0.04		mA
$C_J$	$V_R = 400 \text{ V}$	$T_{VJ} = 125^\circ\text{C}$		9		pF
$R_{thJC}$		(per diode)			8	K/W
$R_{thJS}$				11.5		K/W

## Features

- Silicon Carbide Schottky Diodes
  - no reverse recovery at turn off
  - only charge of junction capacity
  - soft turn off waveform
  - no forward recovery at turn on
  - switching behaviour independent of temperature
  - low leakage current
- ISOPLUS i4-PAC™ package
  - isolated back surface
  - low coupling capacity between pins and heatsink
  - enlarged creepage towards heatsink
  - application friendly pinout
  - high reliability
  - industry standard outline

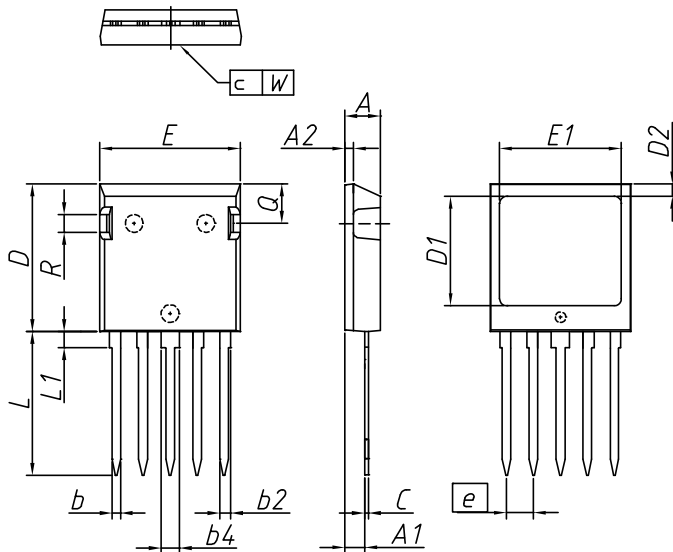
## Applications

- output rectifiers of high end switch mode power supplies
- other high frequency rectifiers

Component			
Symbol	Conditions	Maximum Ratings	
$T_{VJ}$	operating	-40...+175	°C
$T_{stg}$		-40...+125	°C
$V_{ISOL}$	$I_{ISOL} \leq 1 \text{ mA}$ ; 50/60 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	1.7			mm
$d_S; d_A$	pin - backside metal	5.5			mm
<b>Weight</b>			9		g

Dimensions in mm (1 mm = 0.0394")



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