

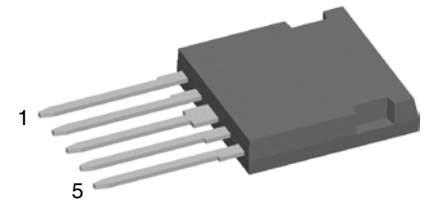
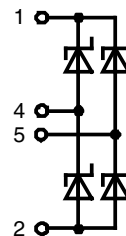
Silicon Carbide Schottky Rectifier Bridge

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° (per diode)	3	A
$I_{D(AVM)}$	$T_C = 90^\circ\text{C}$	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				
		$(T_{VJ} = 25^\circ\text{C}, \text{ unless otherwise specified})$				
		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

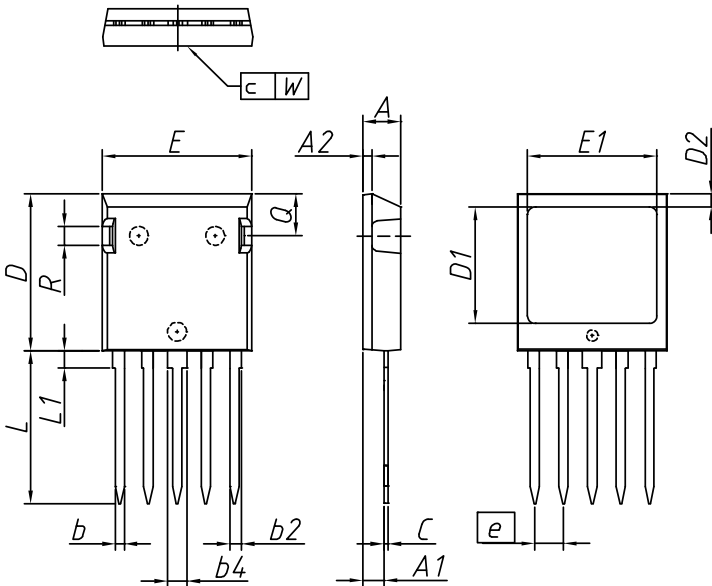
Applications

- 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}	$I_{ISOL} \leq 1 \text{ mA}; 50/60 \text{ Hz}$	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	1.7			mm
$d_S; d_A$	pin - backside metal	5.5			mm
Weight			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