

# Silicon Carbide Schottky Rectifier Bridge

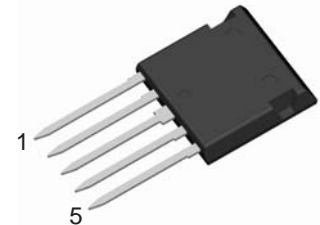
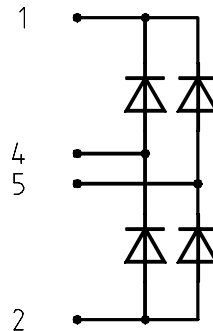
in ISOPLUS i4-PAC™

## FBS 10-06SC

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

$$I_{D(AV)M} = 6.6 \text{ A}$$

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



### 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
$I_{FSM}$	$T_{VJ} = 25^\circ\text{C}$ ; $t = 10 \text{ ms}$ ; sine 50 Hz	12	A
$P_{\text{tot}}$	$T_C = 25^\circ\text{C}$ (per diode)	19	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(TM) package
  - isolated back surface
  - low coupling capacity between pins and heatsink
  - 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.
$V_F$	$I_F = 4 \text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$		1.7 1.9	2.0 V V
$I_R$	$V_R = V_{RRM}$ ; $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$		0.04	0.2 mA mA
$C_J$	$V_R = 400 \text{ V}$ ; $T_{VJ} = 125^\circ\text{C}$		9	pF
$R_{\text{thJC}}$ $R_{\text{thJS}}$	(per diode)		11.5	8 K/W K/W

### Applications

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

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

**Component**

Symbol	Conditions	Maximum Ratings	
$T_{VJ}$		-55...+175	°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	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")**
