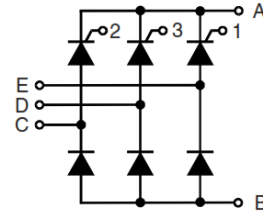


## Three Phase Half Controlled Bridge Rectifier, 60 Amps

### Features

- Easy connections, screw type terminals
- Good surge current capability
- Low forward voltage drop
- Improved temperature & power dissipation
- Easy mounting



Voltage Ratings ( $T_J = 25^\circ\text{C}$ unless otherwise noted)				
Type number	Voltage code	$V_{RRM}$ , Max. repetitive peak reverse voltage (V)	$V_{RSM}$ , Max. non-repetitive peak reverse voltage (V)	$I_{RRM}$ max @ $T_J$ max (mA)
NHS60	80	800	900	10
	100	1000	1100	
	120	1200	1300	
	140	1400	1500	
	160	1600	1700	

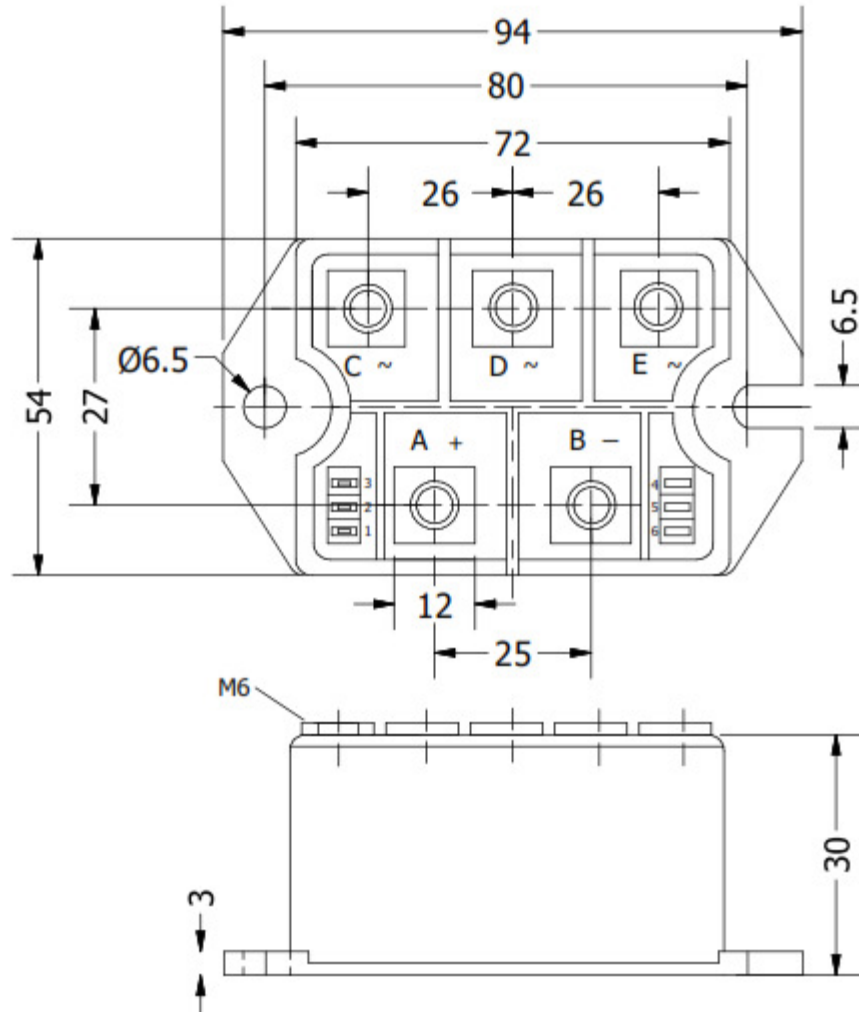


Electrical Specifications ( $T_J = 25^\circ\text{C}$ unless otherwise noted)				
Parameters	Conditions	Symbol	Values	Units
Maximum on-state average current	$T_C = 85^\circ\text{C}$	$I_D$	60	A
Forward surge current (non-repetitive), one cycle	$f = 50\text{Hz}$ , $T_{VJ} = 25^\circ\text{C}$	$I_{FSM}$ , $I_{TSM}$	470	A
Maximum forward voltage drop	$I_T = 200\text{A}$ , $T_{VJ} = 25^\circ\text{C}$	$V_T$	max. 1.75	V
Current required for fusing	$f = 50\text{Hz}$ , $T_{VJ} = 25^\circ\text{C}$	$I^2t$	1100	$\text{A}^2\text{s}$
Maximum rate of rise of on-state current	$T_{VJ} = T_{VJM}$ , $f = 50\text{Hz}$	$di/dt$	max. 50	$\text{A}/\mu\text{s}$
Critical rate of rise of off-state voltage	$T_{VJ} = T_{VJM}$	$dv/dt$	max. 500	$\text{V}/\mu\text{s}$
Gate voltage to trigger	$T_{VJ} = 25^\circ\text{C}$	$V_{GT}$	min. 3	V
Gate current to trigger	$T_{VJ} = 25^\circ\text{C}$	$I_{GT}$	min. 150	mA
Holding current	$T_{VJ} = 25^\circ\text{C}$	$I_H$	100	mA
Latching current	$T_{VJ} = 25^\circ\text{C}$	$I_L$	250	mA
RMS isolation voltage	$f = 50\text{Hz}$ , $t = 1 \text{ min}$	$V_{ISO}$	3000	V

Thermal and Mechanical Specifications ( $T_J = 25^\circ\text{C}$ unless otherwise noted)			
Parameters	Symbol	Values	Units
Operating junction temperature range	$T_{VJ}$	- 40 to + 125	$^\circ\text{C}$
Maximum storage temperature range	$T_{STG}$	- 40 to + 125	$^\circ\text{C}$
Maximum thermal resistance, junction to case	$R_{th(j-c)}$	1.0	$^\circ\text{C}/\text{W}$
Mounting torque $\pm 10\%$	to heatsink	5	Nm
	to terminal	4	
Approximate weight	W	320	g

## Package Outline

(All dimensions in mm)



## Ordering Table

<i>NHS</i>	<i>100</i>	<i>/</i>	<i>160</i>
1	2		3

- 1 – Three-phase half-controlled bridge
- 2 – Current rating =  $I_D$
- 3 – Voltage Code x 10 =  $V_{RRM}$  (See Voltage Ratings Table)