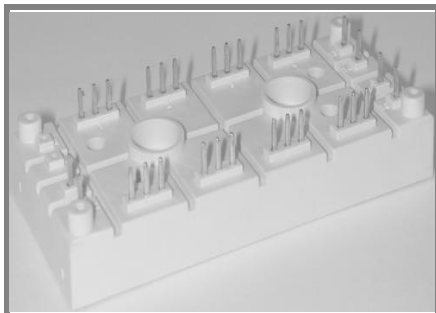


SKDH 146/.. -L75



SEMIPONT™ 6

3-Phase Bridge Rectifier + IGBT braking chopper

SKDH 146/.. -L75

Target Data

Features

- Compact design
- Two screws mounting
- Heat transfer and isolation through direct copper bonded aluminium oxide ceramic (DCB)
- High surge currents
- Up to 1600V reverse voltage
- UL recognized, file no. E 63 532

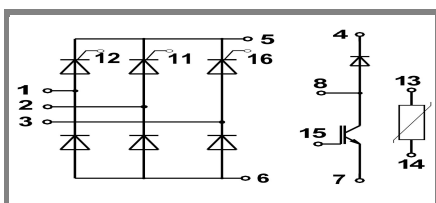
Typical Applications

- DC drives
- Controlled filed rectifiers for DC motors
- Controlled battery charger

V_{RSM} V	V_{RRM}, V_{DRM} V	$I_D = 140$ A (maximum value for continuous operation) ($T_s = 80$ °C)
1300	1200	SKDH 146/12-L75
1700	1600	SKDH 146/16-L75

Absolute Maximum Ratings		$T_s = 25$ °C, unless otherwise specified		
Symbol	Conditions	Values	Units	
Bridge - Rectifier				
I_D	$T_s = 80$ °C; inductive load	140	A	
I_{FSM}/I_{TSM}	$t_p = 10$ ms; sin 180°; T_{jmax}	1250	A	
i^2t	$t_p = 10$ ms; sin 180°; T_{jmax}	7800	A²s	
IGBT - Chopper				
V_{CES}/V_{GES}		1200 / 20	V	
I_C	$T_s = 25$ (70) °C	100 (75)	A	
I_{CM}	$t_p = 1$ ms; $T_s = 25$ (70) °C	200 (150)	A	
Freewheeling - CAL Diode				
V_{RRM}		1200	V	
I_F	$T_s = 25$ (70) °C	90 (70)	A	
I_{FM}	$t_p = 1$ ms; $T_s = 25$ (70) °C	180 (140)	A	
T_{vj}	Diode & IGBT (Thyristor)	- 40 ... + 150 (-40...+ 125)		°C
T_{stg}		- 40 ... + 125		°C
T_{solder}	terminals, 10 s	260		°C
V_{isol}	a.c. (50) Hz, RMS 1 min. / 1 s	3000 / 3600		V

Characteristics		$T_s = 25$ °C, unless otherwise specified			
Symbol	Conditions	min.	typ.	max.	Units
Diode - Rectifier					
V_{TO} / r_t	$T_j = 125$ °C	0,8 / 4			V / mΩ
$R_{th(j-s)}$	per diode			0,8	K/W
IGBT - Chopper					
$V_{CE(sat)}$	$I_C = 75$ A, $T_j = 25$ °C; $V_{GE} = 15$ V	2,35			V
$R_{th(j-s)}$	per IGBT			0,4	K/W
$t_{d(on)} / t_r$	valid for all values:	70 / 50			ns
$t_{d(off)} / t_f$	$V_{CC} = 600$ V; $V_{GE} = 15$ V; $I_C = 75$ A; $T_j = 125$ °C;	450 / 45			ns
$E_{on} + E_{off}$	$T_j = 125$ °C; $R_G = 7$ Ω; inductive load	16			mJ
CAL - Diode - Freewheeling					
$V_{T(TO)} / r_t$	$T_j = 125$ °C	1 / 11	1,2 / 15		V / mΩ
$R_{th(j-s)}$	per diode			0,8	K/W
I_{RRM}	valid for all values:	45			A
Q_{rr}	$I_F = 75$ A; $V_R = -600$ V; $di_F/dt = -800$ A/μs	11			μC
E_{off}	$V_{GE} = 0$ V; $T_j = 125$ °C				mJ
Temperature Sensor					
R_{TS}	$T = 25$ (100) °C;	1000 (1670)			Ω
Mechanical data					
M_S	mounting Torque	2,5	3,5		Nm

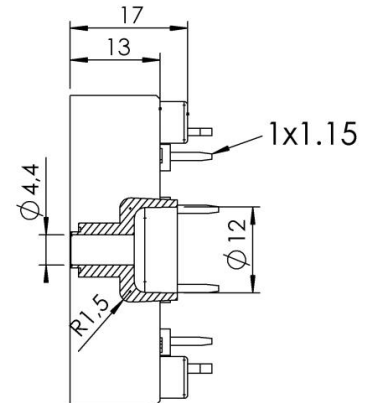
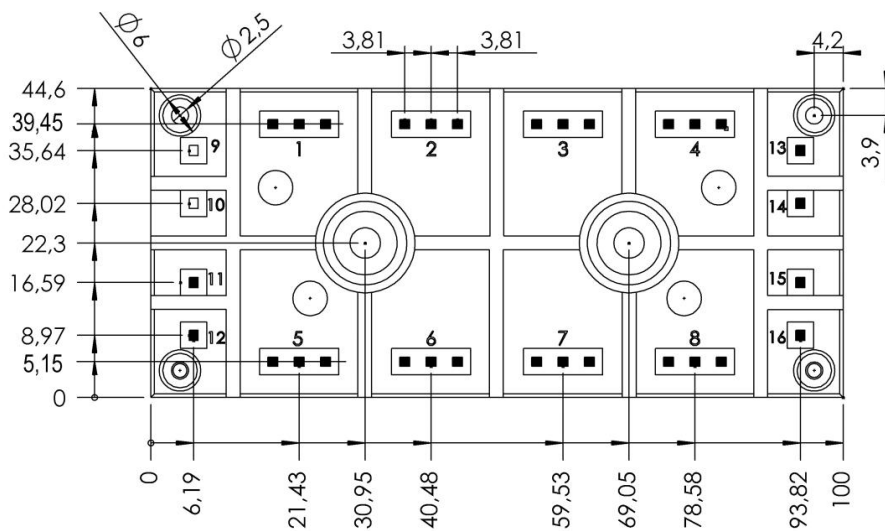
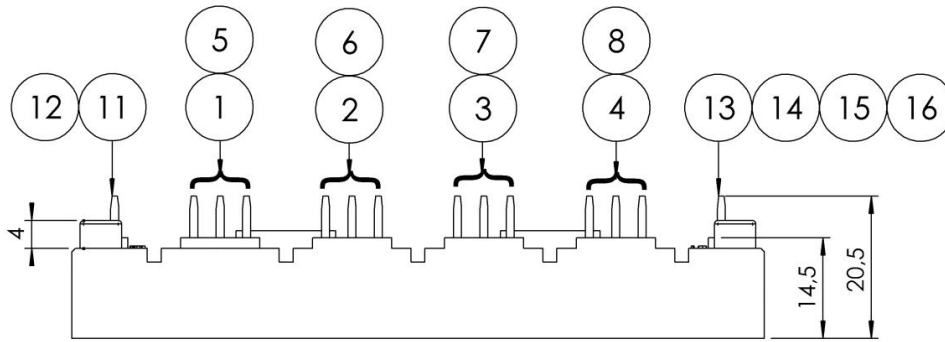


DH

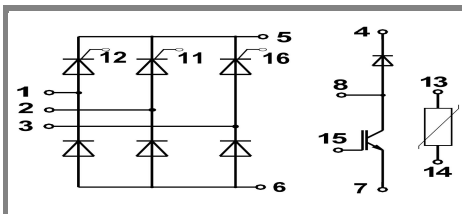
SKDH 146/.. -L75

UL Recognized
File no. E 63 532

Dimensions in mm



Case G 59



Case G 59

This is an electrostatic discharge sensitive device (ESDS), international standard IEC 60747-1, Chapter IX.

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