

V_{RSM}	=	5200 V	Rectifier Diode 5SDD 08D5000 Target specification
I_{FAVM}	=	810 A	
I_{FRMS}	=	1270 A	
I_{FSM}	=	10.5 kA	
V_{F0}	=	0.90 V	
r_F	=	0.600 mΩ	

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- Very low on-state losses
- Optimum power handling capability

Blocking

Part Number	5SDD 08D5000	5SDD 08D4800	5SDD 08D4400	Conditions	
V_{RRM}	5000 V	4800 V	4400 V	f = 50 Hz, $t_p = 10ms$	$T_j = 0-160^{\circ}C$
V_{RSM}	5200 V	5000 V	4600 V	$t_p = 10ms$	
I_{RRM}	≤ 50 mA			V_{RRM}	$T_j = 160^{\circ}C$

Mechanical data

F_m	Mounting force	nom.	11 kN
		min.	8 kN
		max.	12 kN
a	Acceleration		
	Device unclamped		50 m/s ²
	Device clamped		100 m/s ²
D_p	Pole-piece diameter		34 mm
H	Housing thickness		26 mm
m	Weight IGCT		0.3 kg
D_s	Surface creepage distance	$\geq$	25 mm
D_a	Air strike distance	$\geq$	14 mm

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On-state

I _{FAVM}	Max. average on-state current	810 A	50 Hz, T _C = 90°C, Half sine wave		
I _{FRMS}	Max. RMS on-state current	1270 A			
I _{FSM}	Max. peak non-repetitive surge current	10.5 kA	t _p =	10 ms	T _J = 160°C
		11 kA	t _p =	8.3 ms	After surge:
I ² t	Limiting load integral	550 kA ² s	t _p =	10 ms	V _R = 0V
		505 kA ² s	t _p =	8.3 ms	
V _F	On-state voltage	1.80 V	I _F =	1500 A	T _J = 160°C
V _{F0}	Threshold voltage	0.90 V	I _F =	500 - 1500 A	
r _F	Slope resistance	0.600 mΩ			

Switching

Q_{rr}	Recovery charge	max	μAs	$di_F/dt = -30\text{A}/\mu\text{s}$	$V_R = 200\text{ V}$
				$I_{FRM} = \text{A}$	$T_j = 160^\circ\text{C}$

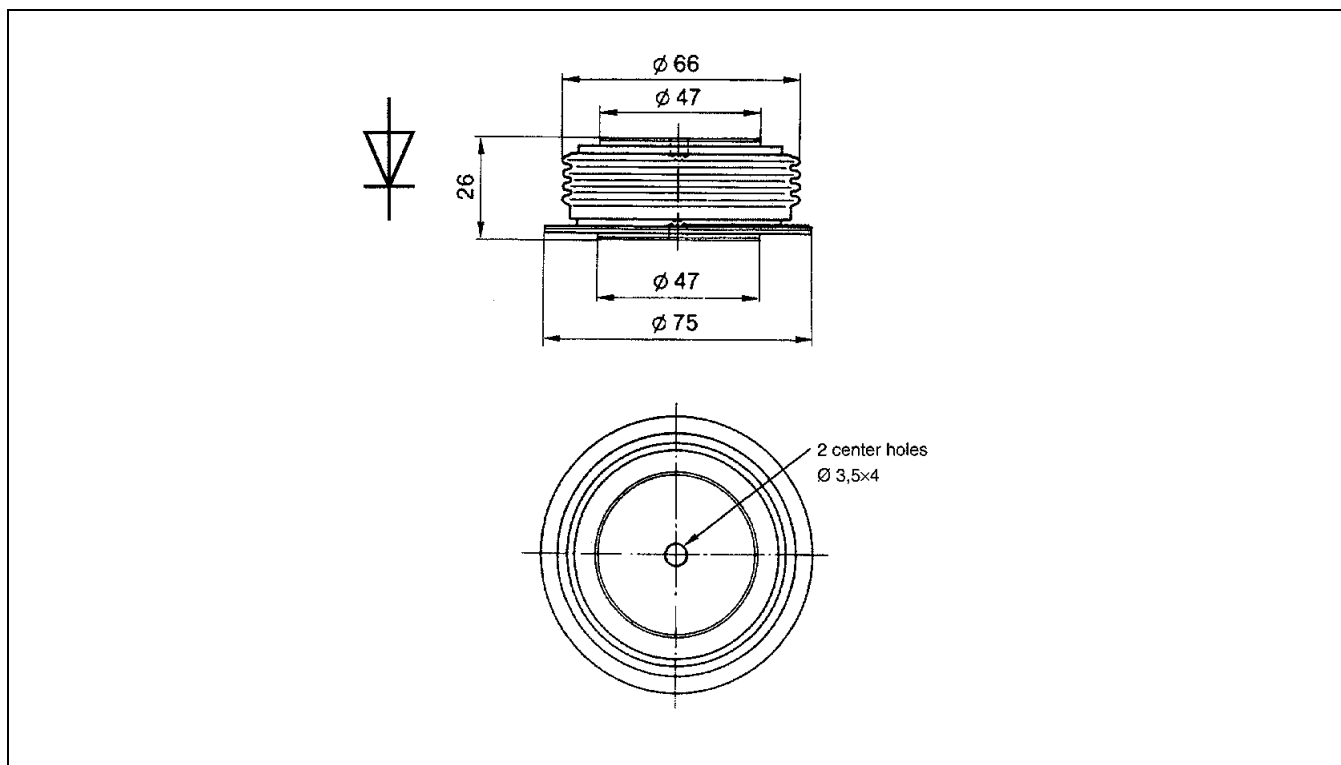


Fig. 1 Outline drawing. All dimensions are in millimeters and represent nominal values unless stated otherwise.

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ABB Semiconductors AG
 Fabrikstrasse 3
 CH-5600 Lenzburg, Switzerland

Doc. No. 5SYA1165-00 Sep. 01

Telephone +41 (0)62 888 6419
 Fax +41 (0)62 888 6306
 Email abbsem@ch.abb.com
 Internet www.abbsem.com