

$V_{RRM} = 13.5 \text{ kV}$
 $I_{PULSE} = 60 \text{ kA}$
 $V_F = 7.89 \text{ V}$
 $r_F = 0.69 \text{ m}\Omega$
 $V_{Dcmax} = 12 \text{ kV}$

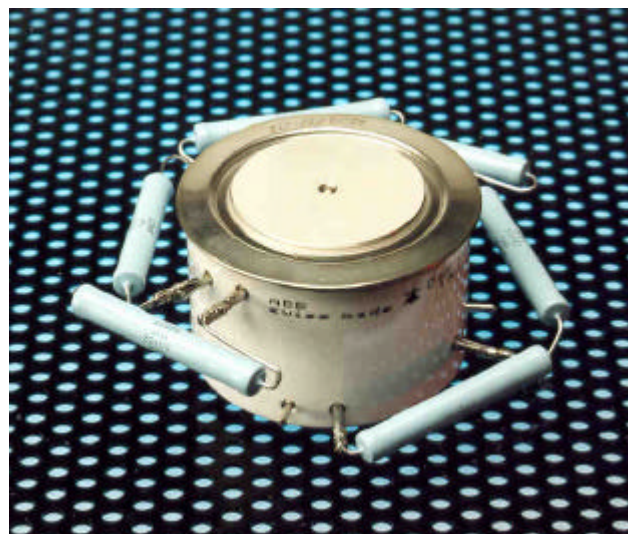
High Voltage High Current Diode for Pulsed Power Applications

5SDA 27Z1350

Doc. No. 5SYA 06PP-01 Oct. 01

Features

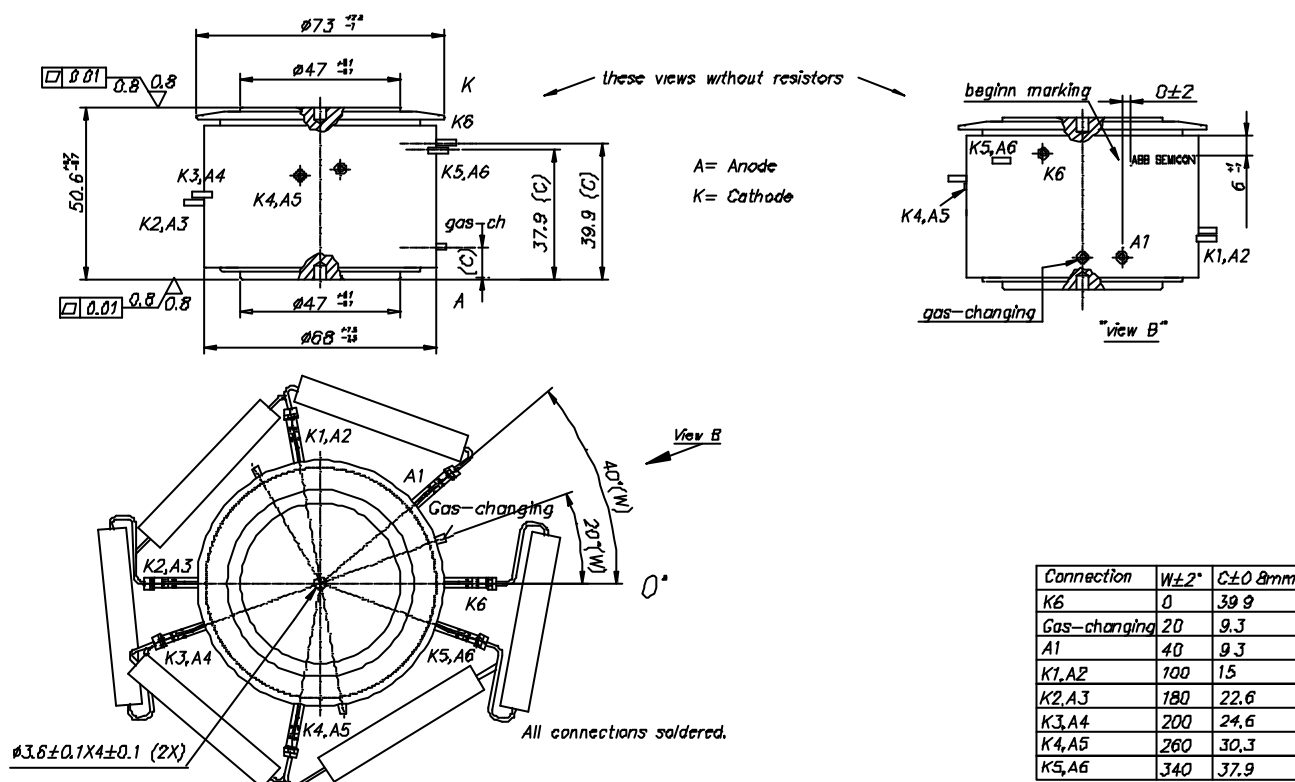
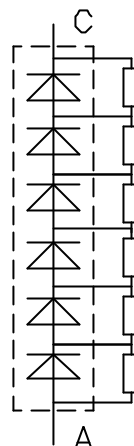
- Multichip Design with 6 Wafers in Series
- For Single Pulse Applications
- Voltage Sharing Resistors included
- Compact Design
- Glazed Ceramic Presspack Housing
- High Reliability



V_{RRM}	Repetitive reverse blocking voltage	13.5 kV	$T_{vj} = 0 \dots 125^\circ\text{C}$
V_{DC}	Permanent DC voltage for 100 FIT failure rate	9 kV	At $T_j \leq 50^\circ\text{C}$. Ambient cosmic radiation at sea level in open air.
V_{DC}	Max. DC voltage	12 kV	For $\leq 60 \text{ sec}$ at $T_j \leq 50^\circ\text{C}$
I_{PULSE}	Max. Pulse Current	60 kA	Half sine wave, $T_j \leq 50^\circ\text{C}$, $t_p \leq 500 \mu\text{s}$
di/dt	Max. current rate of rise	500 A/ μs	Single Pulse
I^2t	Limiting load integral	$0,9 \times 10^6 \text{ A}^2\text{s}$	$T_p = 500 \mu\text{s}$, $T_j = 50^\circ\text{C}$
V_F	Forward voltage drop	$\leq 7.89 \text{ V}$	$I_F = 4000 \text{ A}$, $T_j = 50^\circ\text{C}$
V_{F0}	Threshold voltage	5.13 V	$T_j = 50^\circ\text{C}$
r_T	Slope resistance	0.69 m Ω	$T_j = 50^\circ\text{C}$
R_P	Voltage sharing resistors	10 M Ω	8,5 W / wafer level

Pulse Power Device **5SDA 27Z1350****Mechanical Data**

F_M	Mounting force	min.	17 kN
		max.	24 kN
D_p	Pole-piece diameter		47 mm
H	Housing thickness		51 mm
M	Weight		1,0 kg
D_s	Surface creepage distance		42 mm
D_a	Air strike distance		29 mm

**ABB Semiconductors AG**

Department for Pulsed Power

Fabrikstrasse 3

CH-5600 Lenzburg, Switzerland

Tel.: +41-79-540-9381

Fax: +41-62 888 6310

E-Mail: pulsepower.abbsem@ch.abb.comInternet: www.abbsem.com

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