5SSA

Old part no. S 833

Silicon Surge Voltage Suppressor

Properties

- Diffused pnp – Si structure
- hermetically sealed in metal-ceramic package
- Available to protect power devices (thyristors) against small and medium power surges (e.g. 200 kW over 10 µs)

Applications

- Traction, HVDC transmission, generator excitation,
- transmitter power supply, high power motor controls

Mechanical Data

M_u	**Mounting torque**	**10 ± 1 Nm**
m	**Weight**	**61 g**
D_S	**Surface creepage distance**	**15 mm**
D_a	**Air strike distance**	**15 mm**

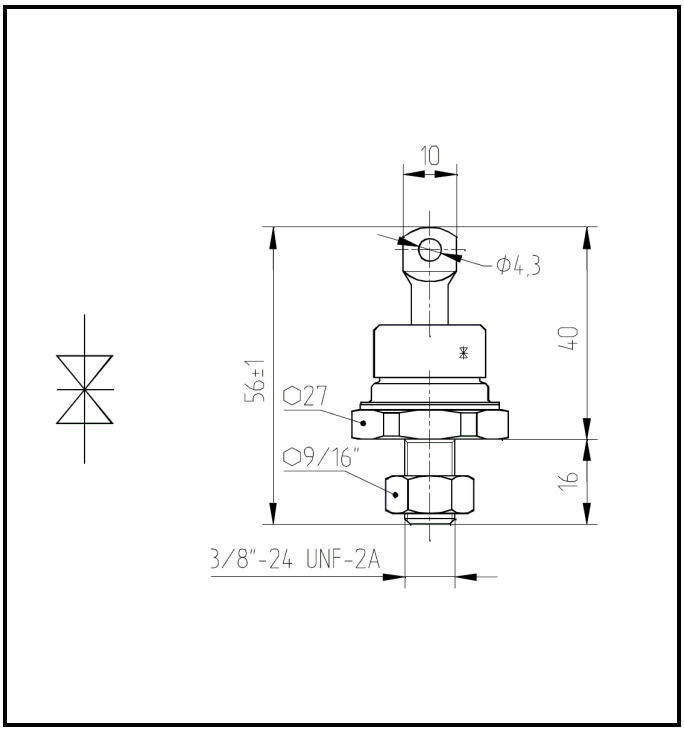

Fig. 1 Case

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type	*Old part no.*	V_R *(V)*	*Thyristor* V_{DRM} *(V)* V_{RRM} *(V)*	I_{RM} *(A) for base width*				P_{RAV} *(W)*
				1 x 10 µs	*1 x 100 µs*	*1 x 1 ms*	*1 x 10 ms*	
5SSA 50R0500	S 833-500-05	500 ± 60	500	500	135	33	7.5	30
5SSA 50R0600	S 833-500-06	600 ± 60	600					
5SSA 38R0700	S 833-380-07	700 ± 60	700	380	100	25	4.5	
5SSA 38R0800	S 833-380-08	800 ± 60	800					
5SSA 30R0900	S 833-300-09	900 ± 60	900	300	80	21	4.0	
5SSA 30R1000	S 833-300-10	1000 ± 60	1000					
5SSA 26R1100	S 833-260-11	1100 ± 60	1100	260	67	18	3.6	
5SSA 26R1200	S 833-260-12	1200 ± 60	1200					
5SSA 23R1300	S 833-230-13	1300 ± 60	1300	230	58	15	3.4	
5SSA 23R1400	S 833-230-14	1400 ± 60	1400					
5SSA 20R1500	S 833-200-15	1500 ± 60	1500	200	50	13	3.0	
5SSA 20R1600	S 833-200-16	1600 ± 60	1600					

Notes:
V_R ... Symmetrical avalanche voltage at I_A = 20 A, t_p = 10 µs, T_{vj} = 60 °C
I_{RM} ... Max. avalanche current for a single sine half wave pulse
P_{RAV} ... Admissible continuous losses at R_{thja} < 1 K/W, T_a < 60 °C
T_{vj} . . . the initial virtual junction temperature

Maximum Ratings		*Maximum Limits*	*Unit*
T_{jmin} - T_{jmax}	**Operating temperature range**	**-40 ÷ 125**	**°C**
T_{STG}	**Storage temperature range**	**-40 ÷ 125**	**°C**
	Admissible acceleration (vibration)	**10**	**m/s^2**

Characteristics		*Value*		*Unit*
		typ	*max*	
V_R	**Dependence of avalanche voltage V_R on junction temperature** *Note 1*	$V_R(T) = V_{R0}[1 + 1.1\times10^{-3}(T - 60\ °C)]$		**V**
C_j	**Junction capacitance** $V_R = 0$ V, $T_j = 60$ °C	**1 100**		**pF**
R_{thjh}	**Thermal resistance junction to heatsink** *Note 2*		**0.6**	**K/W**

Note 1: $V_R(60°C) = V_{RO}$; $V_R(25°C) = 0{,}96 \times V_{RO}$; $V_R(125°C) = 1{,}07 \times V_{RO}$

Notes: