

S 833

POLOVODIČE a.s.

Silicon Surge Voltage Suppressor

Features

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

Applications

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

| Type | V_R (V) |
|--------------|---------------|
| S 833-200-16 | 1600 \pm 60 |
| S 833-200-15 | 1500 \pm 60 |
| S 833-230-14 | 1400 \pm 60 |
| S 833-230-13 | 1300 \pm 60 |
| S 833-260-12 | 1200 \pm 60 |
| S 833-260-11 | 1100 \pm 60 |
| S 833-300-10 | 1000 \pm 60 |
| S 833-300-09 | 900 \pm 60 |
| S 833-380-08 | 800 \pm 60 |
| S 833-380-07 | 700 \pm 60 |
| S 833-500-06 | 600 \pm 60 |
| S 833-500-05 | 500 \pm 60 |

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| Type | V_R (V) | Thyristor V_{DRM} (V) V_{RRM} (V) | I_{RM} (A) for base width | | | | P_{RAV} (W) |
|--------------|---------------|---|-----------------------------|----------------------|-----------------|------------------|---------------|
| | | | $1 \times 10 \mu s$ | $1 \times 100 \mu s$ | $1 \times 1 ms$ | $1 \times 10 ms$ | |
| S 833-200-16 | 1600 ± 60 | 1600 | 200 | 50 | 13 | 3 | 30 |
| S 833-200-15 | 1500 ± 60 | 1500 | | | | | |
| S 833-230-14 | 1400 ± 60 | 1400 | 230 | 58 | 15 | 3.4 | 30 |
| S 833-230-13 | 1300 ± 60 | 1300 | | | | | |
| S 833-260-12 | 1200 ± 60 | 1200 | 260 | 67 | 18 | 3.6 | 30 |
| S 833-260-11 | 1100 ± 60 | 1100 | | | | | |
| S 833-300-10 | 1000 ± 60 | 1000 | 300 | 80 | 21 | 4 | 30 |
| S 833-300-09 | 900 ± 60 | 900 | | | | | |
| S 833-380-08 | 800 ± 60 | 800 | 380 | 100 | 25 | 4.5 | 30 |
| S 833-380-07 | 700 ± 60 | 700 | | | | | |
| S 833-500-06 | 600 ± 60 | 600 | 500 | 135 | 33 | 7.5 | 30 |
| S 833-500-05 | 500 ± 60 | 500 | | | | | |

Notice:

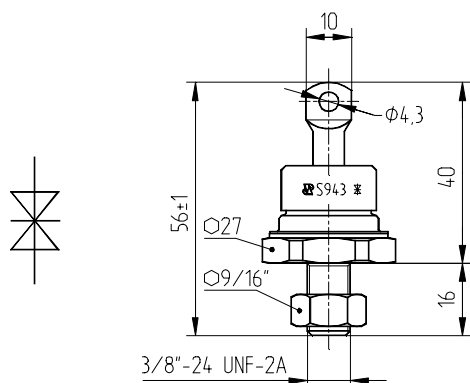
V_R ... Symmetrical avalanche voltage at $I_A = 20 A$, $t_p = 10 \mu s$, $T_{vj} = 60^\circ C$

I_{RM} ... Max. avalanche current for a single sine half wave pulse

P_{RAV} ... Admissible continuous losses at $R_{thja} < 1 K/W$, $T_a < 60^\circ C$

| Major ratings | | Value | Units |
|---------------|---|--|------------|
| $V_R(T_j)$ | Dependence of avalanche voltage V_R on junction temperature | $V_R = V_{R0}[1 + 1.1 \times 10^{-3}(T - 60^\circ C)]$ *) | V |
| C_j | Junction capacitance $U_R = 0 V$, $T_j = 60^\circ C$ | 1100 | pF |
| R_{thJS} | Thermal resistance junction-heatsink | 0.6 | K/W |
| $T_j T_{STG}$ | Operating storage temperature range | -40 125 | $^\circ C$ |
| | Admissible acceleration (vibration) | 10 g | m/s^2 |
| M_u | Mounting torque | $10 \pm 10\%$ | Nm |

*) $V_R(60^\circ C) = V_{R0}$; $V_R(25^\circ C) = 0,96 \times V_{R0}$; $V_R(125^\circ C) = 1,07 \times V_{R0}$.



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