



FAST RECTIFIER DIODE DF141-80X

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|---|--|---|
| <ul style="list-style-type: none"> ◆ $V_{RRM} = \underline{400-1600\text{ V}}$ ◆ $I_{F(AV)} = \underline{80\text{ A}}$ ($T_C = 79^\circ\text{C}$) ◆ $I_{FSM} = \underline{2,2\text{ kA}}$ ($t_p = 10\text{ms}$) |  |  |
| <ul style="list-style-type: none"> ◆ Small recovered time and charge ◆ Acceptable for series and parallel connections (low dispersion Q_{rr}, V_{FM}, I_{RRM}) | | |

MAXIMUM RATED VALUES

| Parameter and conditions | Symbol | Values | Units |
|---|-------------|-------------------|----------------------|
| Repetitive peak reverse voltage, $T_j = -60 \dots +150\text{ }^\circ\text{C}$ | V_{RRM} | 400-1600 | V |
| Non- repetitive peak reverse voltage, $T_j = -60 \dots +150\text{ }^\circ\text{C}$ | V_{RSM} | 500-1700 | |
| Repetitive peak reverse current, $T_j = 150\text{ }^\circ\text{C}$, $V_R = V_{RRM}$ | I_{RRM} | 30 | mA |
| Maximum average forward current, $T_C = 79\text{ }^\circ\text{C}$, $f = 50\text{ Hz}$ | $I_{F(AV)}$ | 80 | A |
| RMS forward current, $T_C = 79\text{ }^\circ\text{C}$, $f = 50\text{ Hz}$ | I_{FRMS} | 125 | |
| Surge non-repetitive current, $T_j = 150\text{ }^\circ\text{C}$, $V_R = 0$, $t_p = 10\text{ ms}$ | I_{FSM} | 2,2 | kA |
| Safety factor | I^2t | $24,2 \cdot 10^3$ | A^2s |
| Operation junction temperature range | T_j | -60 ... +150 | $^\circ\text{C}$ |
| Storage temperature range | T_{stg} | -60 ... +50 | |

**DF141-80X**

| ELECTRICAL CHARACTERISTICS | | | | | |
|---|---------------|--------|------|------|-------|
| Parameter and conditions | Symbol | Values | | | Units |
| | | min | typ. | max | |
| Maximum peak forward voltage, $T_j = 25\text{ °C}$, $I_F = 250\text{ A}$ | V_{FM} | - | - | 2,2 | V |
| On-state threshold voltage, $T_j = 150\text{ °C}$, $I_F = 125 - 380\text{ A}$ | V_{TO} | - | - | 1,10 | |
| On-state slope resistance, $T_j = 150\text{ °C}$, $I_F = 125 - 380\text{ A}$ | r_T | - | - | 4,4 | mΩ |
| Reverse recovery time $T_j = 150\text{ °C}$, $I_F = 80\text{ A}$, $di_F/dt = -50\text{ A}/\mu\text{s}$, $V_R \geq 100\text{ V}$ | t_{rr} | - | - | 1,6 | μs |
| THERMAL PARAMETERS | | | | | |
| Thermal resistance junction to case, DC per diode cathode side cooled | $R_{th(j-c)}$ | - | - | 0,45 | °C/W |
| Thermal resistance case to heatsink, single side cooled | $R_{th(c-h)}$ | - | - | 0,10 | |
| MECHANICAL PARAMETERS | | | | | |
| Weight | w | - | 0,09 | - | kg |
| Torque | Md | 6 | - | 10 | Nm |



DF141-80X

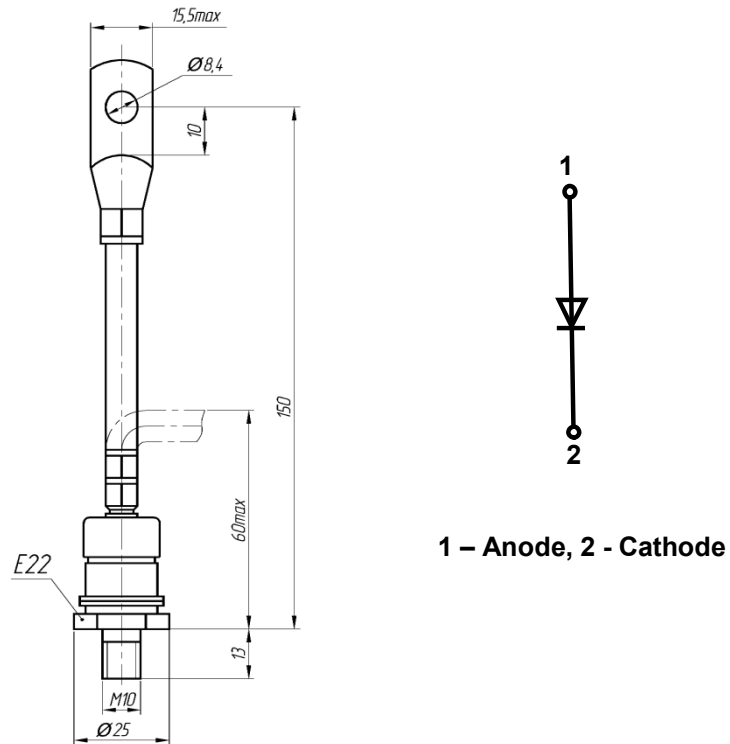


Fig. 1. Device Outline Drawing
(dimensions in mm)



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