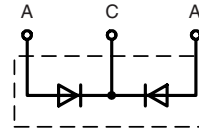


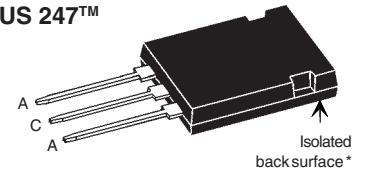
## Power Schottky Rectifier with common cathode

$$\begin{aligned} I_{FAV} &= 2 \times 35 \text{ A} \\ V_{RRM} &= 80 \text{ V} \\ V_F &= 0.64 \text{ V} \end{aligned}$$

| $V_{RSM}$ | $V_{RRM}$ | Type          |
|-----------|-----------|---------------|
| V         | V         |               |
| 80        | 80        | DSSK 70-008AR |



ISOPLUS 247™



C = Cathode, A = Anode

| Symbol         | Conditions                                                                                     | Maximum Ratings |                  |
|----------------|------------------------------------------------------------------------------------------------|-----------------|------------------|
| $I_{FRMS}$     |                                                                                                | 70              | A                |
| $I_{FAV}$      | $T_C = 150^\circ\text{C}$ ; rectangular, $d = 0.5$                                             | 35              | A                |
| $I_{FAV}$      | $T_C = 150^\circ\text{C}$ ; rectangular, $d = 0.5$ ; per device                                | 70              | A                |
| $I_{FSM}$      | $T_{VJ} = 45^\circ\text{C}$ ; $t_p = 10 \text{ ms}$ (50 Hz), sine                              | 600             | A                |
| $E_{AS}$       | $I_{AS} = 35 \text{ A}$ ; $L = 100 \mu\text{H}$ ; $T_{VJ} = 25^\circ\text{C}$ ; non repetitive | 61              | mJ               |
| $I_{AR}$       | $V_A = 1.5 \cdot V_{RRM}$ typ.; $f = 10 \text{ kHz}$ ; repetitive                              | 3.5             | A                |
| $(dv/dt)_{cr}$ |                                                                                                | tbd             | V/ $\mu\text{s}$ |
| $T_{VJ}$       |                                                                                                | -55...+175      | $^\circ\text{C}$ |
| $T_{VJM}$      |                                                                                                | 175             | $^\circ\text{C}$ |
| $T_{stg}$      |                                                                                                | -55...+150      | $^\circ\text{C}$ |
| $P_{tot}$      | $T_C = 25^\circ\text{C}$                                                                       | 190             | W                |
| $F_C$          | mounting force with clip                                                                       | 20...120        | N                |
| $V_{ISOL}$     | 50/60 Hz, RMS; $t = 1 \text{ s}$                                                               | 3000            | V~               |
| Weight         | typical                                                                                        | 6               | g                |

### Features

- International standard package
- Very low  $V_F$
- Extremely low switching losses
- Low  $I_{RM}$ -values
- Isolated and UL registered E153432

### Applications

- Rectifiers in switch mode power supplies (SMPS)
- Free wheeling diode in low voltage converters

### Advantages

- High reliability circuit operation
- Low voltage peaks for reduced protection circuits
- Low noise switching
- Low losses

Dimensions see Outlines.pdf

| Symbol                   | Conditions                                                                                                                                                       | Characteristic Values |                            |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|
|                          |                                                                                                                                                                  | typ.                  | max.                       |
| $I_R$ ①                  | $V_R = V_{RRM}$ ; $T_{VJ} = 25^\circ\text{C}$<br>$V_R = V_{RRM}$ ; $T_{VJ} = 125^\circ\text{C}$                                                                  |                       | 4 mA<br>10 mA              |
| $V_F$                    | $I_F = 35 \text{ A}$ ; $T_{VJ} = 125^\circ\text{C}$<br>$I_F = 35 \text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$<br>$I_F = 70 \text{ A}$ ; $T_{VJ} = 125^\circ\text{C}$ |                       | 0.64 V<br>0.76 V<br>0.80 V |
| $R_{thJC}$<br>$R_{thCH}$ | 0.25                                                                                                                                                             |                       | 0.8 K/W<br>K/W             |

Pulse test: ① Pulse Width = 5 ms, Duty Cycle < 2.0 %  
Data according to IEC 60747 and per diode unless otherwise specified

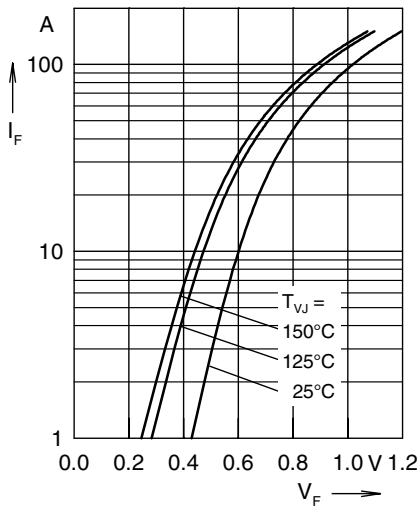


Fig. 1 Max. forward voltage drop characteristics

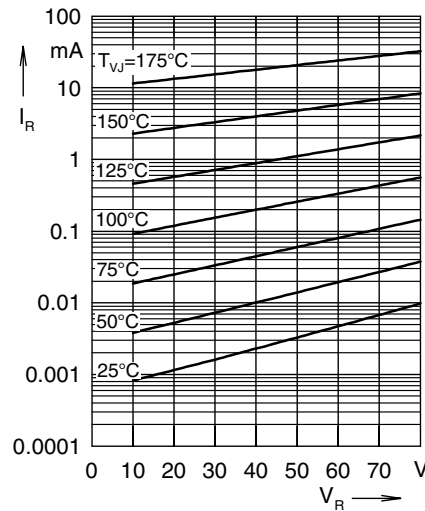


Fig. 2 Typ. reverse current  $I_R$  versus reverse voltage

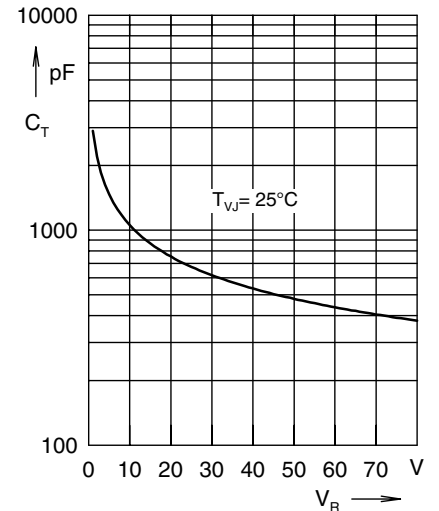


Fig. 3 Typ. junction capacitance  $C_T$  vs. reverse voltage  $V_R$

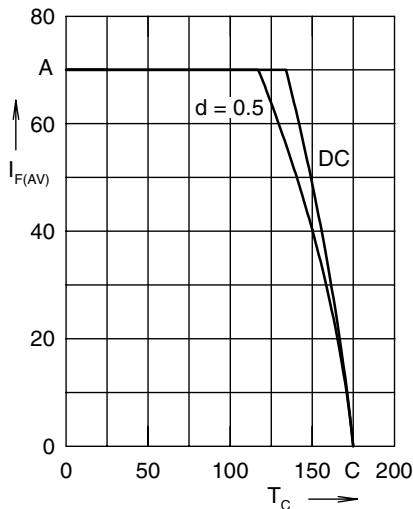


Fig. 4 Avg. forward current  $I_{F(AV)}$  vs. case temperature  $T_C$

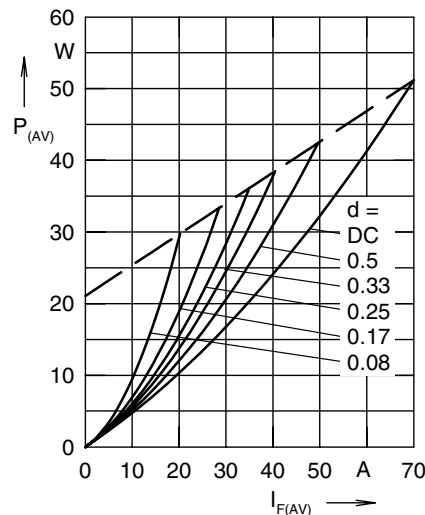


Fig. 5 Forward power loss characteristics

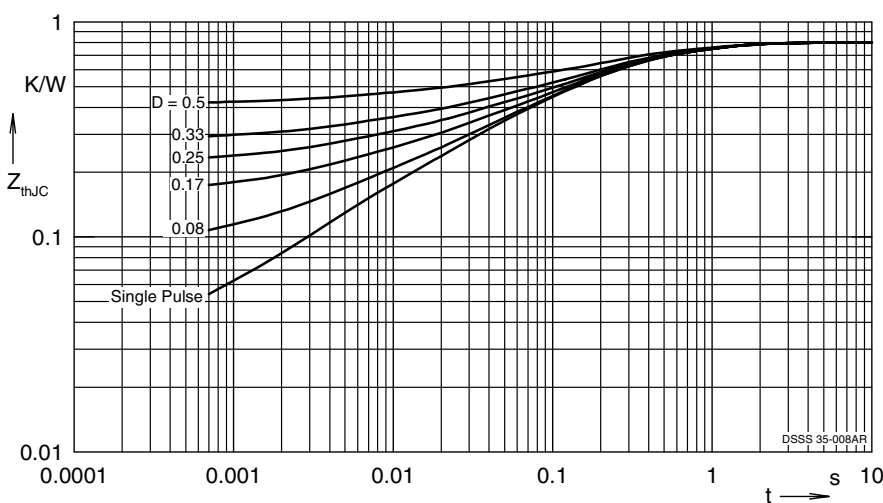


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode

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