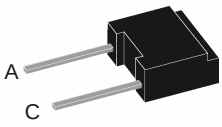
# Rectifier Diode
# Avalanche Diode

$V_{RRM}$ = 1200-1800 V
$I_{F(RMS)}$ = 7 A
$I_{F(AV)M}$ = 2.3 A

| $V_{RSM}$ V | $V_{(BR)min}$ ① V | $V_{RRM}$ V | Standard Type | Avalanche Types |
|---|---|---|---|---|
| 1300 | 1300 | 1200 | DS 1-12D | DSA 1-12D |
| 1700 | 1750 | 1600 | | DSA 1-16D |
| 1900 | 1950 | 1800 | | DSA 1-18D |

① Only for Avalanche Diodes


A = Anode C = Cathode

| Symbol | Test Conditions | | Maximum Ratings | |
|---|---|---|---|---|
| $I_{FRMS}$ | $T_{VJ}$ = $T_{VJM}$ | | 7 | A |
| $I_{F(AV)M}$ | $T_{amb}$ = 45°C; $R_{thJA}$ = 38 K/W; 180° sine | | 2.3 | A |
| | $T_{amb}$ = 45°C; $R_{thJA}$ = 80 K/W; 180° sine | | 1.3 | A |
| $P_{RSM}$ | DSA types, $T_{VJ}$ = $T_{VJM}$, $t_p$ = 10 µs | | 1.6 | kW |
| $I_{FSM}$ | $T_{VJ}$ = 45°C; | t = 10 ms (50 Hz), sine | 110 | A |
| | $V_R$ = 0 | t = 8.3 ms (60 Hz), sine | 118 | A |
| | $T_{VJ}$ = $T_{VJM}$ | t = 10 ms (50 Hz), sine | 100 | A |
| | $V_R$ = 0 | t = 8.3 ms (60 Hz), sine | 104 | A |
| $I^2t$ | $T_{VJ}$ = 45°C | t = 10 ms (50 Hz), sine | 60 | $A^2s$ |
| | $V_R$ = 0 | t = 8.3 ms (60 Hz), sine | 58 | $A^2s$ |
| | $T_{VJ}$ = $T_{VJM}$ | t = 10 ms (50 Hz), sine | 50 | $A^2s$ |
| | $V_R$ = 0 | t = 8.3 ms (60 Hz), sine | 45 | $A^2s$ |
| $T_{VJ}$ | | | -40...+150 | °C |
| $T_{VJM}$ | | | 150 | °C |
| $T_{stg}$ | | | -40...+150 | °C |
| **Weight** | | | 0.8 | g |

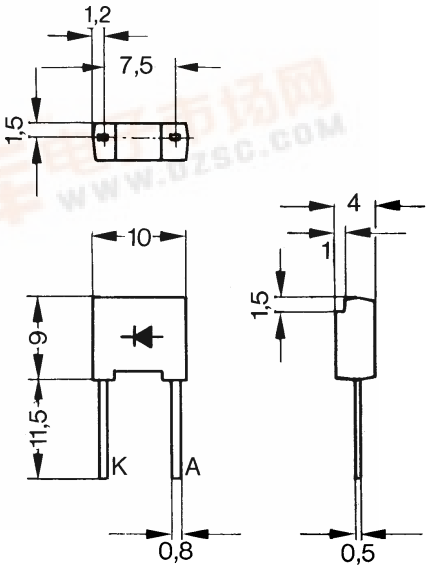
| Symbol | Test Conditions | | Characteristic Values | |
|---|---|---|---|---|
| $I_R$ | $T_{VJ}$ = $T_{VJM}$; $V_R$ = $V_{RRM}$ | ≤ | 0.7 | mA |
| $V_F$ | $I_F$ = 7 A; $T_{VJ}$ = 25°C | ≤ | 1.3 | V |
| $V_{T0}$ | For power-loss calculations only | | 0.8 | V |
| $r_T$ | $T_{VJ}$ = $T_{VJM}$ | | 67 | mΩ |
| $R_{thJA}$ | Forced air cooling with 1.5 m/s, $T_{amb}$ = 45°C | | 38 | K/W |
| | Soldered on to PC board, $T_{amb}$ = 45°C | | 80 | K/W |
| $d_S$ | Creepage distance on surface | | 8.5 | mm |
| $d_A$ | Strike distance through air | | 6.7 | mm |
| a | Max. allowable acceleration | | 100 | $m/s^2$ |

**Features**
- Plastic standard package
- Planar glassivated chips

**Applications**
- Low power rectifiers
- Field supply for DC motors
- Power supplies
- High voltage rectifiers

**Advantages**
- Space and weight savings
- Simple PCB mounting
- Improved temperature and power cycling
- Reduced protection circuits

**Dimensions in mm (1 mm = 0.0394")**




Data according to IEC 60747
IXYS reserves the right to change limits, test conditions and dimensions