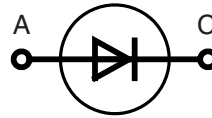


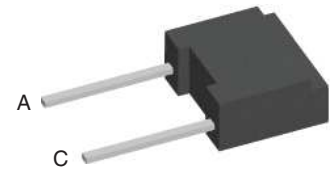
Avalanche Diode

Preliminary data

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



$$\begin{aligned}
 V_{RRM} &= 1200-1800 \text{ V} \\
 I_{F(RMS)} &= 7 \text{ A} \\
 I_{FAVM} &= 2.3 \text{ A}
 \end{aligned}$$



A = Anode, C = Cathode

Symbol	Conditions	Maximum Ratings	
I_{FRMS}	$T_{VJ} = T_{VJM}$	7	A
I_{FAVM}	$T_{amb} = 45^{\circ}\text{C}; R_{thJA} = 38 \text{ K/W}; 180^{\circ} \text{ sine}$	2.3	A
	$T_{amb} = 45^{\circ}\text{C}; R_{thJA} = 80 \text{ K/W}; 180^{\circ} \text{ sine}$	1.3	A
P_{RSM}	$T_{VJM}, t_p = 10 \mu\text{s}$	1.6	kW
I_{FSM}	$T_{VJ} = 45^{\circ}\text{C}; t = 10 \text{ ms} \text{ (50 Hz), sine}$	110	A
	$t = 8.3 \text{ ms} \text{ (60 Hz), sine}$	118	
	$T_{VJ} = 150^{\circ}\text{C}; t = 10 \text{ ms} \text{ (50 Hz), sine}$	100	A
	$t = 8.3 \text{ ms} \text{ (60 Hz), sine}$	104	
I^2t	$T_{VJ} = 45^{\circ}\text{C}; t = 10 \text{ ms} \text{ (50 Hz), sine}$	60	A ² s
	$t = 8.3 \text{ ms} \text{ (60 Hz), sine}$	58	
	$T_{VJ} = 150^{\circ}\text{C}; t = 10 \text{ ms} \text{ (50 Hz), sine}$	50	A ² s
	$t = 8.3 \text{ ms} \text{ (60 Hz), sine}$	45	
T_{VJ}		-40...+150	°C
T_{VJM}		150	°C
T_{stg}		-40...+150	°C
Weight	typical	0.8	g

Features

- Plastic standard package
- Planar passivated 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 & power cycling
- Reduced protection circuits

Symbol	Conditions	Characteristic Values		
		typ.	max.	
I_R	$V_R = V_{RRM} \quad T_{VJ} = T_{VJM}$		0.7	mA
V_F	$I_F = 7 \text{ A} \quad T_{VJ} = 25^{\circ}\text{C}$		1.34	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, $T_{amb} = 45^{\circ}\text{C}$ Soldered on to PC board, $T_{amb} = 45^{\circ}\text{C}$		38 80	K/W 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

Data according to IEC 60747

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IXYS reserves the right to change limits, test conditions and dimensions.

Dimensions in mm (1 mm = 0.0394")

