

Avalanche Diode

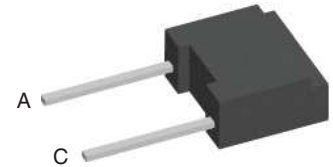
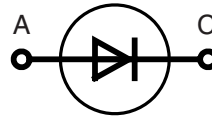
$$V_{RRM} = 1200-1800 \text{ V}$$

$$I_{F(RMS)} = 7 \text{ A}$$

$$I_{FAVM} = 2.3 \text{ A}$$

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



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}	$T_{VJ} = 45^{\circ}\text{C}; t = 10 \text{ ms (50 Hz), sine}$	110	A
	$t = 8.3 \text{ ms (60 Hz), sine}$	118	
	$T_{VJ} = 150^{\circ}\text{C}; t = 10 \text{ ms (50 Hz), sine}$	100	A
	$t = 8.3 \text{ ms (60 Hz), sine}$	104	
I^2t	$T_{VJ} = 45^{\circ}\text{C}; t = 10 \text{ ms (50 Hz), sine}$	60	A ² s
	$t = 8.3 \text{ ms (60 Hz), sine}$	58	
	$T_{VJ} = 150^{\circ}\text{C}; t = 10 \text{ ms (50 Hz), sine}$	50	A ² s
	$t = 8.3 \text{ ms (60 Hz), sine}$	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, $T_{amb} = 45^{\circ}\text{C}$		38	K/W
	Soldered on to PC board, $T_{amb} = 45^{\circ}\text{C}$		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

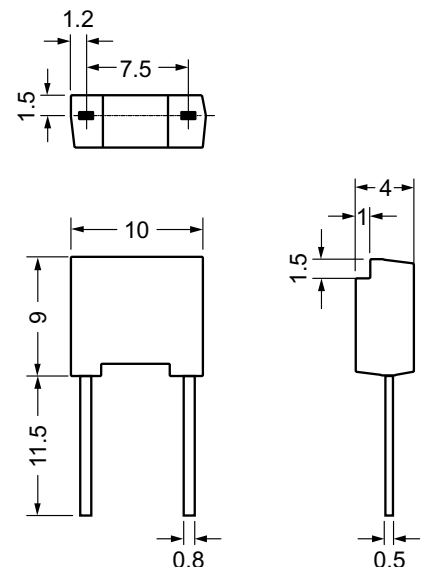
Data according to IEC 60747

Disclaimer Notice

Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice Disclaimer Notice at www.littelfuse.com/disclaimer-electronics.

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

Dimensions in mm (1 mm = 0.0394")



20191128c

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[IXYS:](#)

[DSA1-12D](#) [DSA1-16D](#) [DSA1-18D](#)