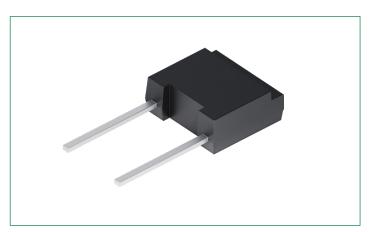
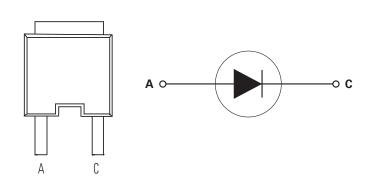
IEC60747



**Pinout Diagram** 



A: Anode; C: Cathode

#### **Preliminary Data**

Туре	V <sub>RSM</sub> (V)	V( <sub>BR)min</sub> (V)	V <sub>RRM</sub> (V)
DSA1-12D	1300	1300	1200
DSA1-16D	1700	1750	1600
DSA1-18D	1900	1950	1800

#### **Features:**

- Plastic standard package
- Planar passivated chips

#### **Advantages:**

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

#### **Applications:**

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

#### **Product Summary**

1

Characteristic	Value	Unit
$V_{RRM}$	1200–1800	V
I <sub>F(RMS)</sub>	7	А
I <sub>FAVM</sub>	2.3	А

DSA1 Diode **Datasheet** 

# **Maximum Ratings**

Symbol	Characteristics	Conditions	Value	Units	
I <sub>F(RMS)</sub>	RMS Forward Current	$T_{VJ} = T_{VJM}$	7	А	
I <sub>F(AV)M</sub>	Maximum Avarage Fermand Current	T <sub>amb</sub> = 45°C; R <sub>thJA</sub> = 38 K/W; 180° sine	2.3	А	
	Maximum Average Forward Current	T <sub>amb</sub> = 45°C; R <sub>thJA</sub> = 80 K/W; 180° sine	1.3	А	
P <sub>RSM</sub>	Maximum Surge Reverse Power Dissipation	$T_{VJM}$ ; $t_p = 10 \text{ ms}$	1.6	kW	
		$T_{VJ} = 45$ °C; t = 10 ms (50 Hz), sine	110	_	
I <sub>FSM</sub>	Maximum Surge Forward Current	T <sub>VJ</sub> = 45°C; t = 8.3 ms (60 Hz), sine	118	A	
		T <sub>VJ</sub> = 150°C; t = 10 ms (50 Hz), sine			
		T <sub>VJ</sub> = 150°C; t = 8.3 ms (60 Hz), sine	104	A	
		$T_{VJ} = 45^{\circ}C$ ; t = 10 ms (50 Hz), sine	60	A <sup>2</sup> s	
l²t	I <sup>2</sup> t Value for Fusing	T <sub>VJ</sub> = 45°C; t = 8.3 ms (60 Hz), sine	58	A-5	
		T <sub>VJ</sub> = 150°C; t = 10 ms (50 Hz), sine	50	A 2 -	
		T <sub>VJ</sub> = 150°C; t = 8.3 ms (60 Hz), sine	45	A <sup>2</sup> s	
T <sub>VJ</sub>	Virtual Junction Temperature	-	-40 to +150	°C	
T <sub>VJM</sub>	Maximum Virtual Junction Temperature	-	150	°C	
T <sub>stg</sub>	Storage Temperature	-	-40 to +150	°C	

## **Static Characteristics**

Cumhal	Characteristics	Conditions -				Units
Symbol	Characteristics			Тур.	Max.	Units
I <sub>R</sub>	Reverse Current	$T_{VJ} = T_{VJM}$	$V_R = V_{RRM}$	-	0.7	mA
V <sub>F</sub>	Forward Voltage	I <sub>F</sub> = 7 A	$T_{VJ} = 25^{\circ}C$	_	1.34	V
V <sub>TO</sub>	Threshold Voltage	For power-loss calculation only		_	0.8	V
r <sub>T</sub>	Slope Resistance	$T_{VJ} = T_{VJM}$		_	67	mΩ

# **Thermal Specifications**

Cumhal	Characteristics	Conditions		Value	
Symbol	Guaracteristics			Max.	Unit
R <sub>thJA</sub> Maximum Thermal Resistance, Jun to Ambient	Maximum Thermal Resistance, Junction	Forced Air Cooling with 1.5 m/s; T <sub>amb</sub> = 45°C	-	38	K/W
	to Ambient	Soldered on to PC board; T <sub>amb</sub> = 45°C	_	80	K/W

# **Physical Specifications**

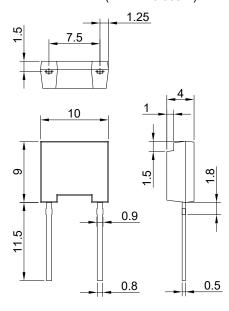
Symbol	Characteristics	Conditions	Value		Unit
	Characteristics	Conditions		Max.	
wt	Weight	-	0.8	-	g
d <sub>s</sub>	Creep distance on surface	-	_	8.5	mm
d <sub>A</sub>	Strike distance through air	-	_	6.7	mm
а	Acceleration	-	_	100	m/s²



DSA1 Diode **Datasheet** 

## **Part Outline Drawing**

Dimension in mm (1 mm = 0.0394")



#### 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 at <a href="http://www.littelfuse.com/disclaimer-electronics">http://www.littelfuse.com/disclaimer-electronics</a>.







