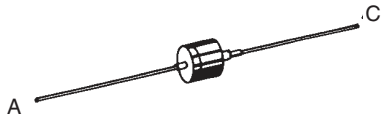
Rectifier Diode
Avalanche Diode

V_{RRM} = 1200-1800 V
$I_{F(RMS)}$ = 7 A
$I_{F(AV)M}$ = 3.6 A

V_{RSM} V	$V_{(BR)min}$ ① V	V_{RRM} V	Standard Types	Avalanche Types
1300	1300	1200	DS 2-12A	DSA 2-12A
1700	1750	1600		DSA 2-16A
1900	1950	1800		DSA 2-18A

① Only for Avalanche Diodes



A = Anode C = Cathode

Symbol	Test Conditions		Maximum Ratings	
$I_{F(RMS)}$	T_{VJ} = T_{VJM}		7	A
$I_{F(AV)M}$	T_{amb} = 45°C; R_{thJA} = 30 K/W; 180° sine		3.6	A
	T_{amb} = 45°C; R_{thJA} = 115 K/W; 180° sine		1.2	A
P_{RSM}	DSA types, T_{VJ} = 25°C, t_p = 10 µs		2.5	kW
I_{FSM}	T_{VJ} = 45°C;	t = 10 ms (50 Hz), sine	120	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	127	A
	T_{VJ} = T_{VJM}	t = 10 ms (50 Hz), sine	100	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	106	A
I^2t	T_{VJ} = 45°C	t = 10 ms (50 Hz), sine	72	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	68	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	47	A^2s
T_{VJM}			180	°C
T_{VJ}			-40...+180	°C
T_{stg}			-40...+180	°C
Weight			2.4	g

Symbol	Test Conditions		Characteristic Values	
I_R	T_{VJ} = 180°C; V_R = V_{RRM}	≤	2	mA
V_F	I_F = 7 A; T_{VJ} = 25°C	≤	1.25	V
V_{T0}	For power-loss calculations only		0.85	V
r_T	T_{VJ} = T_{VJM}		43	mΩ
R_{thJA}	Forced air cooling with 1.5 m/s, T_{amb} = 45°C		30	K/W
	Soldered between 2 cooling fins, T_{amb} = 45°C		37	K/W
	Soldered onto PC board (25 mm), T_{amb} = 45°C		75	K/W
	Free air cooling, T_{amb} = 45°C	115	K/W	
d_S	Creepage distance on surface		2.25	mm
d_A	Strike distance through air		2.25	mm
a	Max. allowable acceleration		100	m/s^2

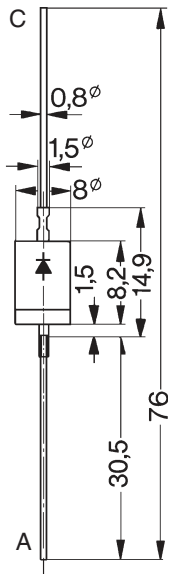
Data according to IEC 60747

Features
- International standard package
- Axial wire connexions
- 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")



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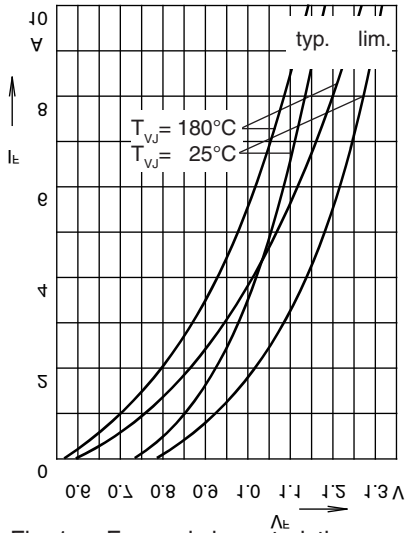

Fig. 1 Forward characteristics

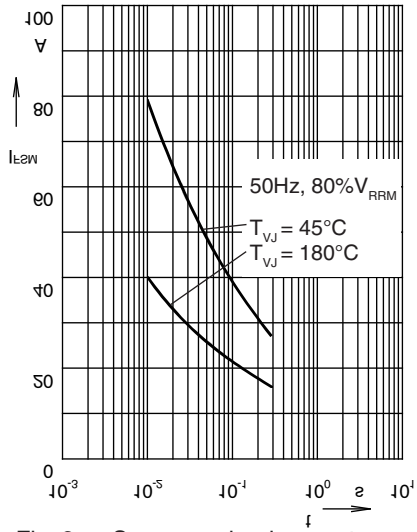

Fig. 2 Surge overload current
I_{FSM}: crest value, t: duration

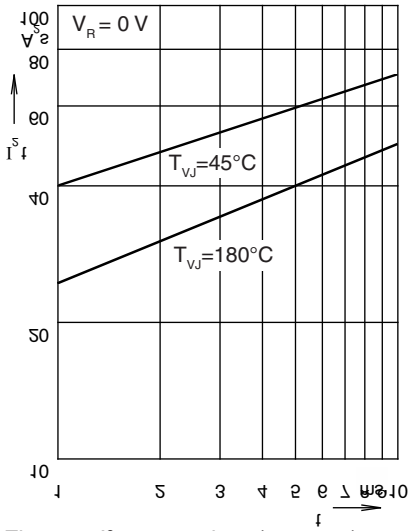

Fig. 3 I^2t versus time (1-10 ms)

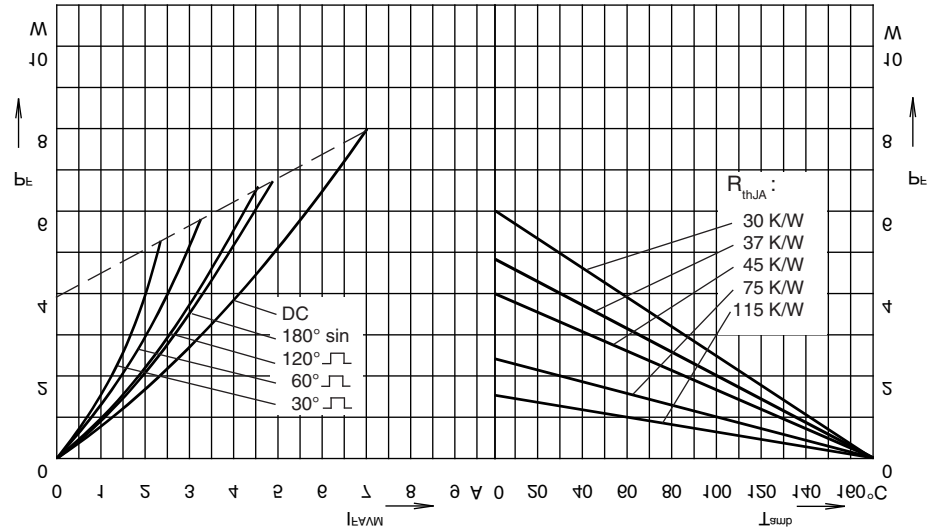

Fig. 4 Power dissipation versus forward current and ambient temperature

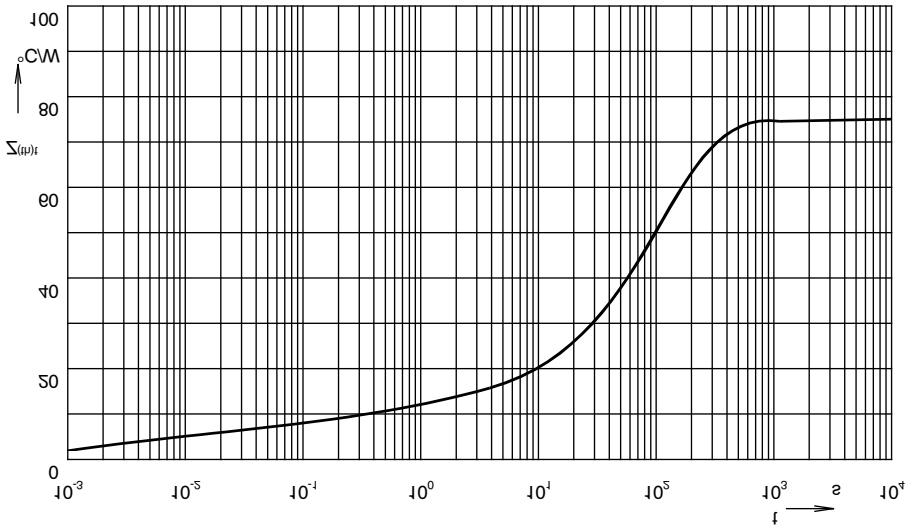

Fig. 5 Transient thermal impedance junction to ambient

R_{thJA} for various conduction angles d:

d	R_{thJA} (K/W)
DC	75
180°	75.7
120°	76.1
60°	76.7
30°	77.4

Constants for Z_{thJA} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.15	0.001
2	10.85	0.1
3	64	35