Rectifier Diode
Avalanche Diode

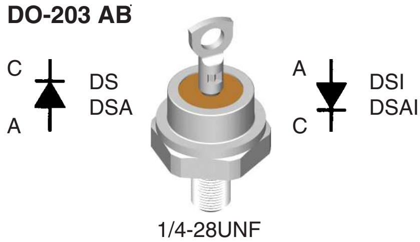
V_{RRM} = 1200-1800 V
$I_{F(RMS)}$ = 160 A
$I_{F(AV)M}$ = 110 A

Replacements see page 3

V_{RSM} V	$V_{(BR)min}$ ① V	V_{RRM} V	Anode on stud	Cathode on stud
1300	-	1200	DS 75-12B	DSI 75-12B
1300	1300	1200	DSA 75-12B	DSAI 75-12B
1700	1760	1600	DSA 75-16B	DSAI 75-16B
1900	1950	1800	DSA 75-18B	DSAI 75-18B

① Only for Avalanche Diodes

DO-203 AB



1/4-28UNF

A = Anode C = Cathode

Symbol	Test Conditions		Maximum Ratings	
$I_{F(RMS)}$	$T_{VJ} = T_{VJM}$		160	A
$I_{F(AV)M}$	T_{case} = 100°C; 180° sine		110	A
P_{RSM}	DSA(I) types, $T_{VJ} = T_{VJM}$, t_p = 10 µs		20	kW
I_{FSM}	T_{VJ} = 45°C;	t = 10 ms (50 Hz), sine	1400	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	1500	A
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz), sine	1250	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	1310	A
I^2t	T_{VJ} = 45°C	t = 10 ms (50 Hz), sine	9800	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	9450	A^2s
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz), sine	7820	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	7210	A^2s
T_{VJ}			-40...+180	°C
T_{VJM}			180	°C
T_{stg}			-40...+180	°C
M_d	Mounting torque		2.4-4.5	Nm
			21-40	lb.in.
Weight			21	g

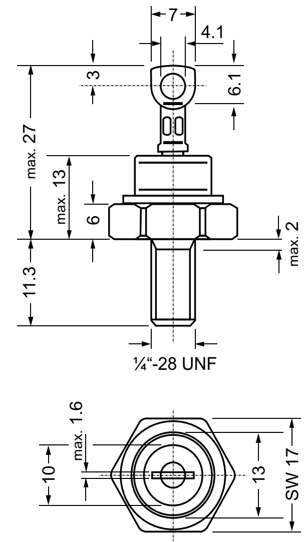
Symbol	Test Conditions		Characteristic Values	
I_R	$T_{VJ} = T_{VJM}$; $V_R = V_{RRM}$	≤	6	mA
V_F	I_F = 150 A; T_{VJ} = 25°C	≤	1.17	V
V_{T0}	For power-loss calculations only		0.75	V
r_T	$T_{VJ} = T_{VJM}$		2	mΩ
R_{thJC}	DC current		0.5	K/W
R_{thJH}	DC current		0.9	K/W
d_S	Creepage distance on surface		4.05	mm
d_A	Strike distance through air		3.9	mm
a	Max. allowable acceleration		100	m/s^2

Features
- International standard package, JEDEC DO-203 AB (DO-5)
- Planar glassivated chips

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

Advantages
- Space and weight savings
- Simple 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

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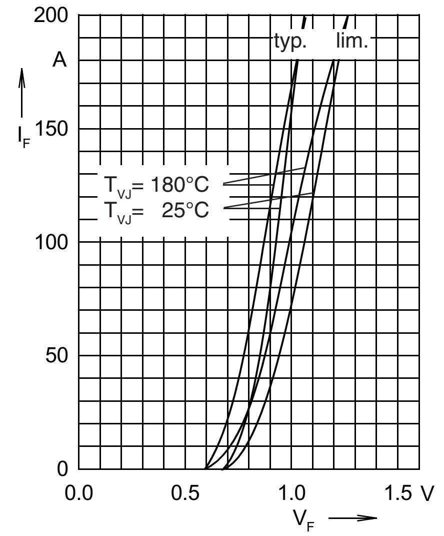

Fig. 1 Forward characteristics

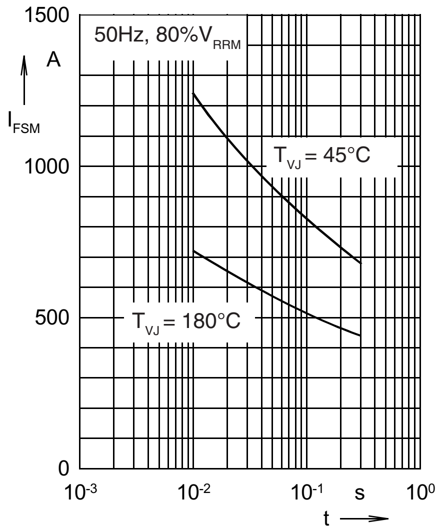

Fig. 2 Surge overload current
I_{FSM}: crest value, t: duration

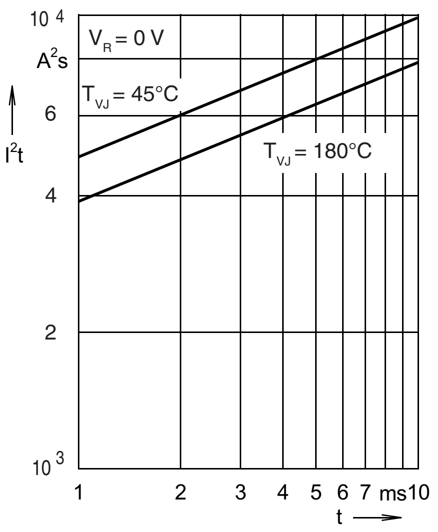

Fig. 3 I^2t versus time (1-10 ms)

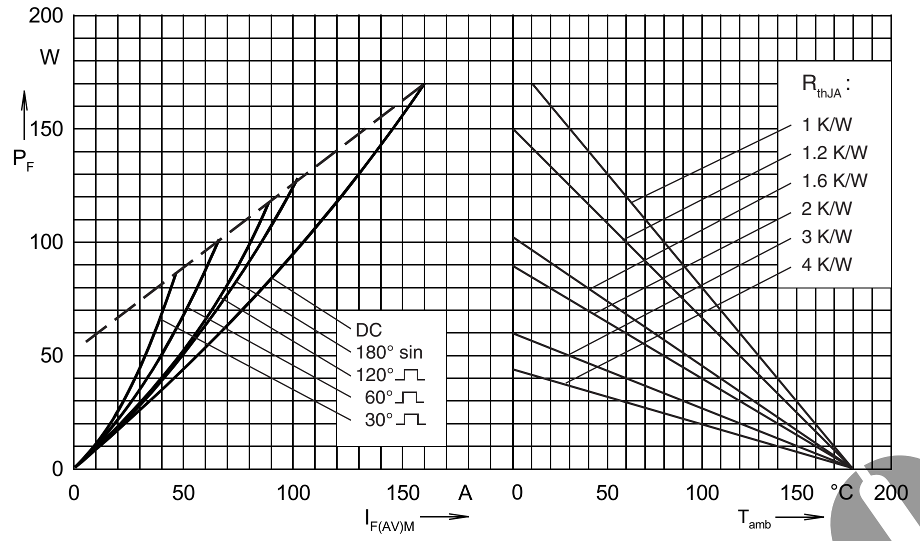

Fig. 4 Power dissipation versus forward current and ambient temperature

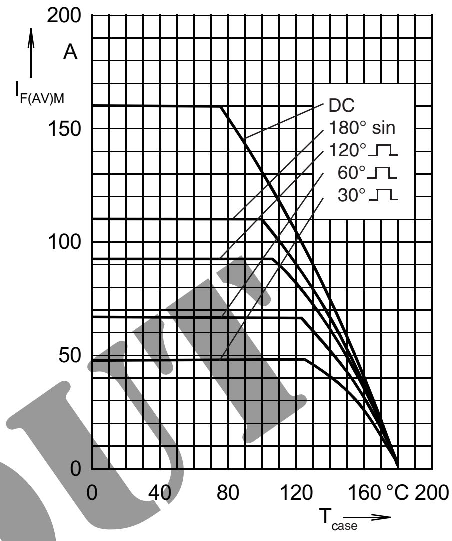

Fig. 5 Max. forward current at case temperature

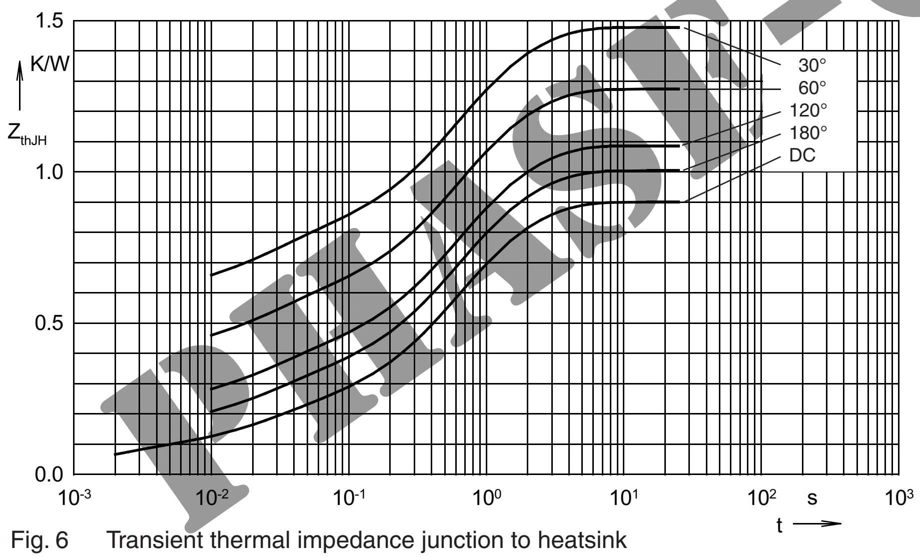

Fig. 6 Transient thermal impedance junction to heatsink

R_{thJH} for various conduction angles d:

d	R_{thJH} (K/W)
DC	0.900
180°	1.028
120°	1.085
60°	1.272
30°	1.476

Constants for Z_{thJH} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.0731	0.0015
2	0.1234	0.0237
3	0.4035	0.4838
4	0.3000	1.5

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Type	Replacements
DSI75-12B	DMA200X1600NA; DMA200XA1600NA
DSAI75-12B	DMA200X1600NA; DMA200XA1600NA; DAA200X1800NA; DAA200XA1800NA
DSAI75-16B	DMA200X1600NA; DMA200XA1600NA; DAA200X1800NA; DAA200XA1800NA
DSAI75-18B	DAA200X1800NA; DAA200XA1800NA
DS75-12B	DMA200X1600NA; DMA200XA1600NA
DSA75-12B	DMA200X1600NA; DMA200XA1600NA; DAA200X1800NA; DAA200XA1800NA
DSA75-16B	DMA200X1600NA; DMA200XA1600NA; DAA200X1800NA; DAA200XA1800NA
DSA75-18B	DAA200X1800NA; DAA200XA1800NA