

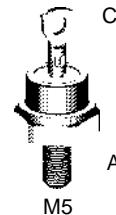
# **Rectifier Diode**

# **Avalanche Diode**

$$\begin{aligned}V_{RRM} &= 800-1800 \text{ V} \\I_{F(RMS)} &= 18 \text{ A} \\I_{F(AV)M} &= 11 \text{ A}\end{aligned}$$

$V_{RSM}$	$V_{(BR)min}$ ①	$V_{RRM}$	Standard	Avalanche
$V$	$V$	$V$	Types	Types
900		800	DS 9-08F	
1300	1300	1200	DS 9-12F	DSA 9-12F
1700	1750	1600		DSA 9-16F
1900	1950	1800		DSA 9-18F

① Only for Avalanche Diodes



A = Anode C = Cathode

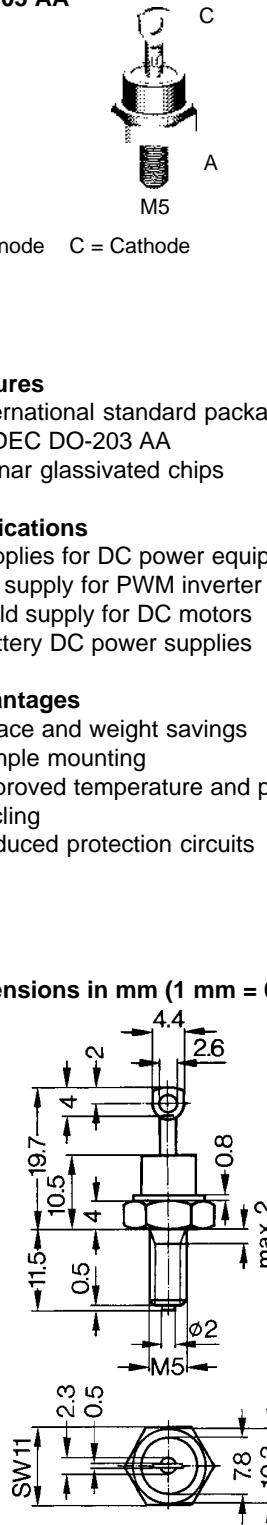
## Symbol Test Conditions

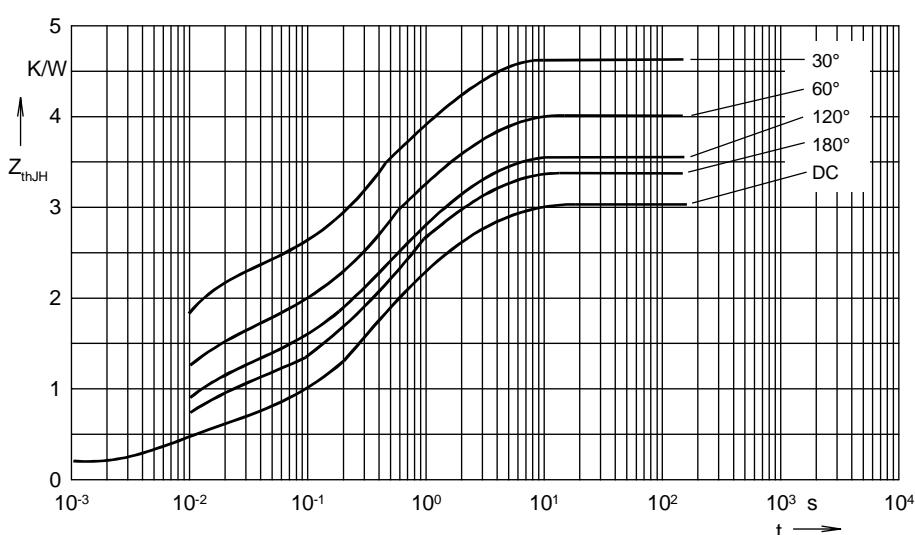
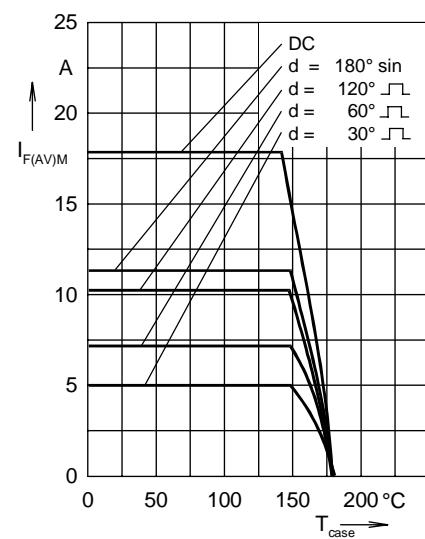
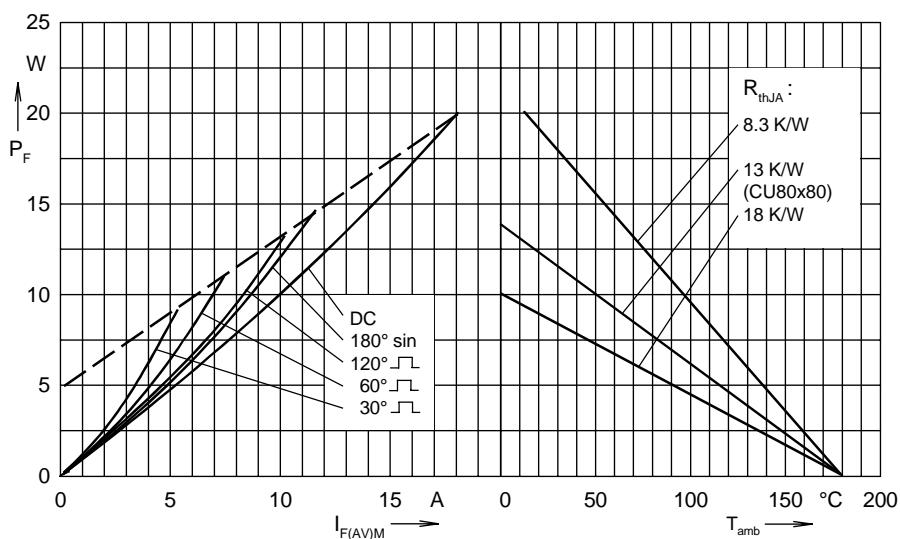
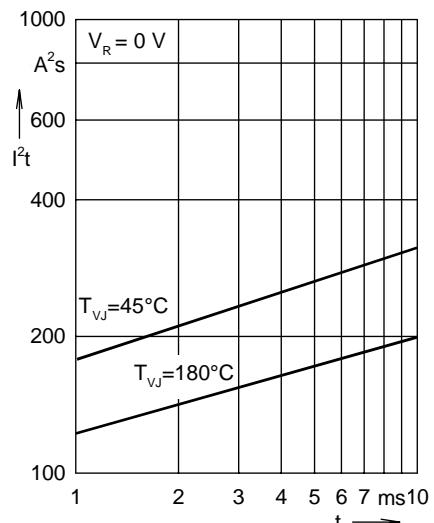
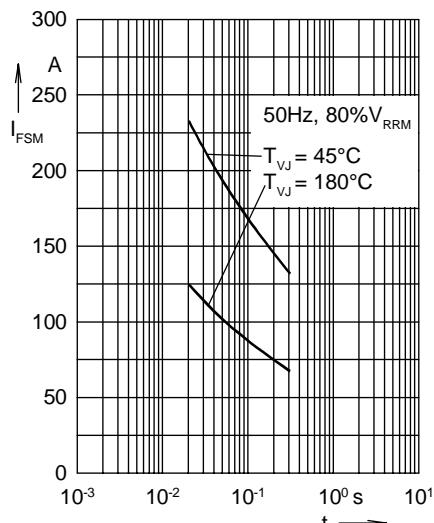
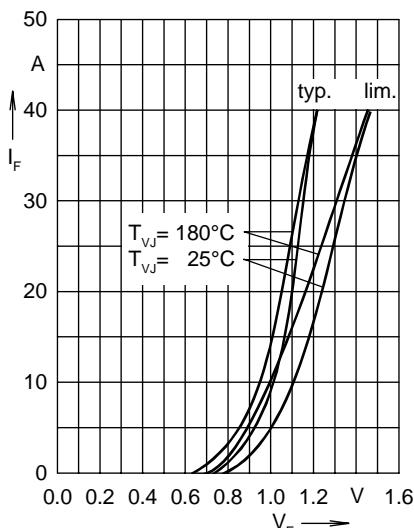
$I_{F(RMS)}$	$T_{VJ} = T_{VJM}$	18	A
$I_{F(AVM)}$	$T_{case} = 150^\circ\text{C}; 180^\circ \text{ sine}$	11	A
$P_{RSM}$	DSA types, $T_{VJ} = T_{VJM}$ , $t_p = 10 \mu\text{s}$	4.5	kW
$I_{FSM}$	$T_{VJ} = 45^\circ\text{C}$ ; $t = 10 \text{ ms (50 Hz), sine}$	250	A
	$V_R = 0$ $t = 8.3 \text{ ms (60 Hz), sine}$	265	A
	$T_{VJ} = T_{VJM}$ $t = 10 \text{ ms (50 Hz), sine}$	200	A
	$V_R = 0$ $t = 8.3 \text{ ms (60 Hz), sine}$	220	A
$I^2t$	$T_{VJ} = 45^\circ\text{C}$ $t = 10 \text{ ms (50 Hz), sine}$	310	$\text{A}^2\text{s}$
	$V_R = 0$ $t = 8.3 \text{ ms (60 Hz), sine}$	295	$\text{A}^2\text{s}$
	$T_{VJ} = T_{VJM}$ $t = 10 \text{ ms (50 Hz), sine}$	200	$\text{A}^2\text{s}$
	$V_R = 0$ $t = 8.3 \text{ ms (60 Hz), sine}$	190	$\text{A}^2\text{s}$
$T_{VJ}$		-40...+180	$^\circ\text{C}$
$T_{VJM}$		180	$^\circ\text{C}$
$T_{stg}$		-40...+180	$^\circ\text{C}$
$M_d$	Mounting torque	2.2-2.8 19-25	Nm lb.in
<b>Weight</b>		5	g

## Symbol Test Conditions

$I_R$	$T_{VJ} = T_{VJM}$ ; $V_R = V_{RRM}$	$\leq$	3	mA
$V_F$	$I_F = 36 \text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$	$\leq$	1.4	V
$V_{T0}$	For power-loss calculations only		0.85	V
$r_T$	$T_{VJ} = T_{VJM}$		15	mΩ
$R_{thJC}$	DC current 180° sine		2.0 2.17	K/W K/W
$R_{thJH}$	DC current		3.0	K/W
$d_s$	Creepage distance on surface		2.0	mm
$d_A$	Strike distance through air		2.0	mm
$a$	Max. allowable acceleration		100	m/s²

Data according to IEC 60747  
IXYS reserves the right to change limits, test conditions and dimensions





d	$R_{thJH}$ (K/W)
DC	3.0
180°	3.35
120°	3.56
60°	4.0
30°	4.64

Constants for  $Z_{thJH}$  calculation:

i	$R_{thi}$ (K/W)	$t_i$ (s)
1	0.095	0.00032
2	0.515	0.0102
3	1.39	0.360
4	1.0	2.30