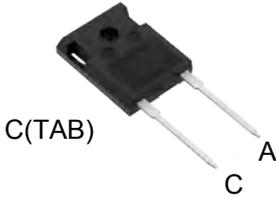
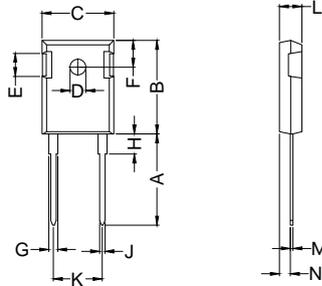


SD7004 thru SD7018

Discrete Diodes



Dimensions TO-247AC



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	19.81	20.32	0.780	0.800
B	20.80	21.46	0.819	0.845
C	15.75	16.26	0.620	0.640
ØD	3.15	3.65	0.124	0.144
E	4.32	5.49	0.170	0.216
F	5.40	6.30	0.213	0.248
G	1.65	2.13	0.065	0.084
H	3.80	4.50	0.150	0.177
J	1.00	1.40	0.039	0.055
K	10.80	11.10	0.425	0.437
L	4.70	5.30	0.185	0.209
M	0.40	0.80	0.016	0.031
N	1.50	2.49	0.059	0.098

A=Anode, C=Cathode, TAB=Cathode

	V_{RSM} V	V_{RRM} V
SD7004	500	400
SD7006	700	600
SD7008	900	800
SD7010	1100	1000
SD7012	1300	1200
SD7016	1700	1600
SD7018	1900	1800

Symbol	Test Conditions	Maximum Ratings	Unit
$I_{F(AV)M}$	$T_C=100^\circ\text{C}$; 180° sine	70	A
I_{FSM}	$T_{VJ}=45^\circ\text{C}$; $V_R=0\text{V}$; $t=10\text{ms}$ (50Hz), sine	1500	A
	$T_{VJ}=150^\circ\text{C}$; $V_R=0\text{V}$; $t=8.3\text{ms}$ (60Hz), sine	1650	
I^2t	$T_{VJ}=45^\circ\text{C}$; $V_R=0\text{V}$; $t=10\text{ms}$ (50Hz), sine	14000	A^2s
	$T_{VJ}=150^\circ\text{C}$; $V_R=0\text{V}$; $t=8.3\text{ms}$ (60Hz), sine	15000	
T_{VJ} T_{VJM} T_{stg}		-40...+150 150 -40...+150	$^\circ\text{C}$
M_d	Mounting torque	0.8...1.2	Nm
Weight		6	g

Symbol	Test Conditions	Characteristic Values	Unit
I_R	$T_{VJ}=T_{VJM}$; $V_R=V_{RRM}$	≤ 3	mA
V_F	$I_F=70\text{A}$; $T_{VJ}=25^\circ\text{C}$	≤ 1.17	V
V_{TO}	For power-loss calculations only	0.73	V
r_T	$T_{VJ}=T_{VJM}$	3.17	mΩ
R_{thJC} R_{thCH}	DC current typical	0.35 0.2	K/W



SD7004 thru SD7018

Discrete Diodes

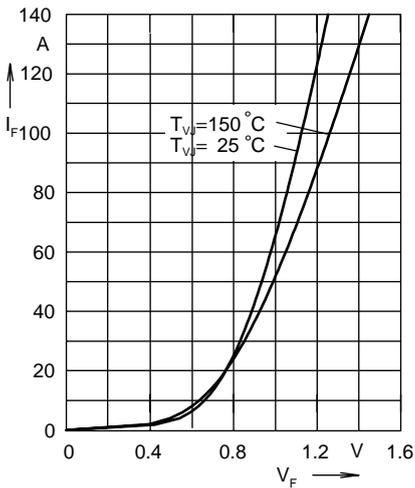


Fig. 1 Forward current versus voltage drop per diode

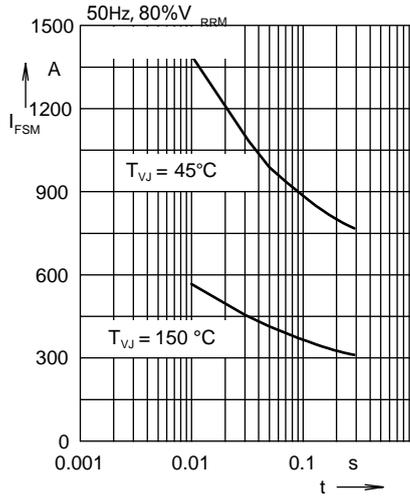


Fig. 2 Surge overload current

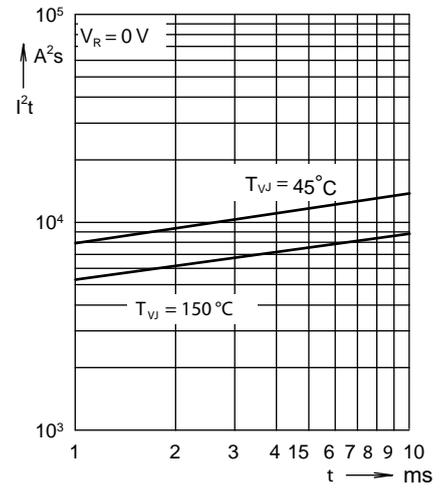


Fig. 3 I^2t versus time per diode

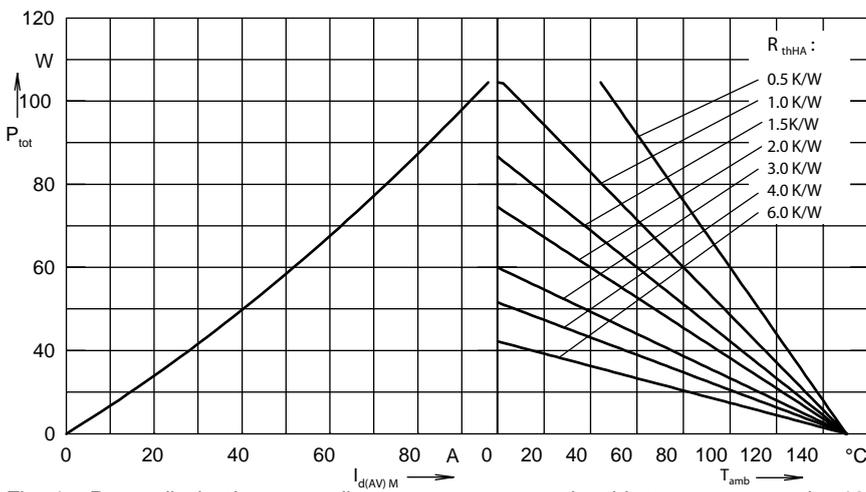


Fig. 4 Power dissipation versus direct output current and ambient temperature, sine 180°

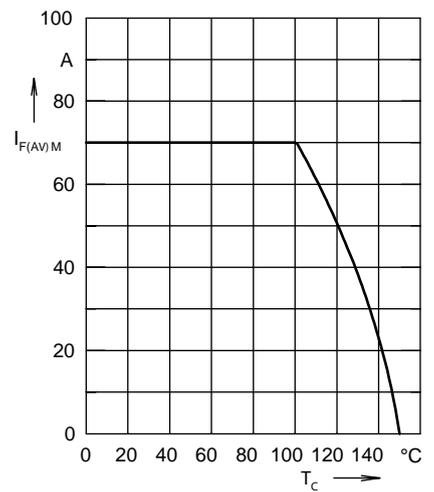


Fig. 5 Max. forward current versus case temperature

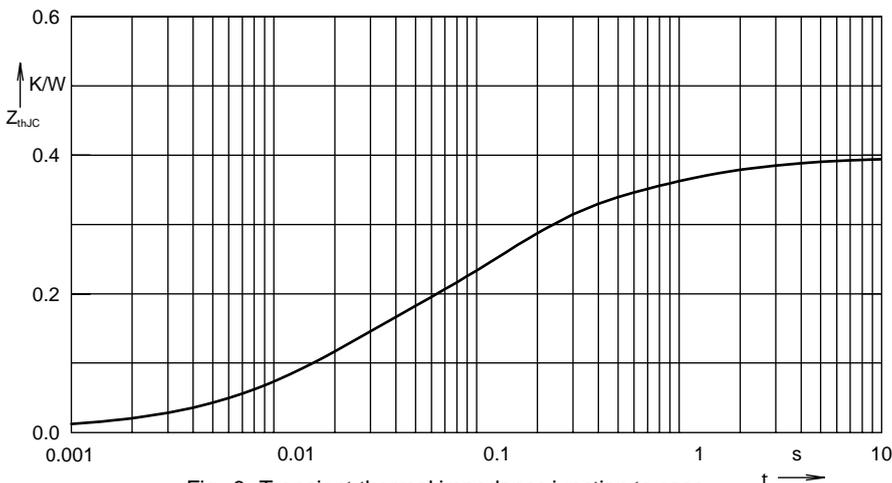


Fig. 6 Transient thermal impedance junction to case



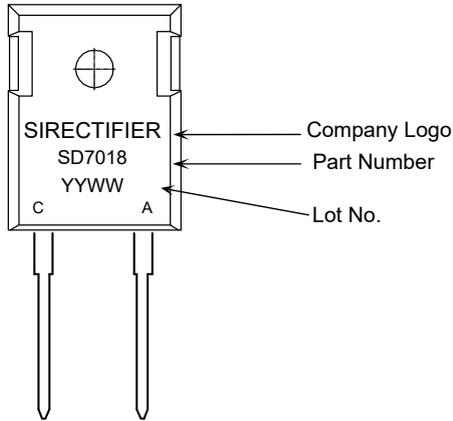
Constants for Z_{thJC} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.1433	0.016
2	0.2217	0.118
3	0.3733	0.588
4	0.39167	2.6

SD7004 thru SD7018

Discrete Diodes

MARKING



ORDERING INFORMATION

Part Number	Package	Shipping	Marking Code
SD7018	TO-247AC	30pcs / Tube	SD7018

