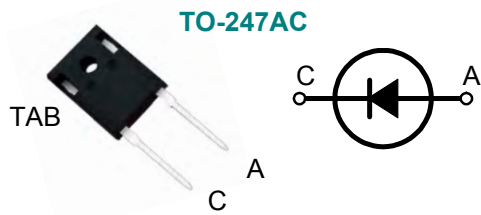


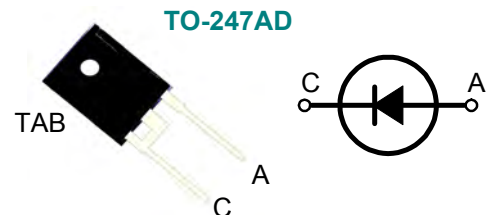
SD4504 thru SD4518

Discrete Diodes



A=Anode, C=Cathode, TAB=Cathode

	V_{RSM} V	V_{RRM} V
SD4504AC	500	400
SD4506AC	500	600
SD4508AC	900	800
SD4510AC	1100	1000
SD4512AC	1300	1200
SD4516AC	1700	1600
SD4518AC	1900	1800



A=Anode, C=Cathode, TAB=Cathode

	V_{RSM} V	V_{RRM} V
SD4504AD	500	400
SD4506AD	500	600
SD4508AD	900	800
SD4510AD	1100	1000
SD4512AD	1300	1200
SD4516AD	1700	1600
SD4518AD	1900	1800

Symbol	Test Conditions	Maximum Ratings	Unit
$I_{F(AV)M}$	$T_C=115^{\circ}C$; 180° sine	45	A
I_{FSM}	$T_{VJ}=45^{\circ}C$; $V_R=0V$; $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	475 520	A
	$T_{VJ}=150^{\circ}C$; $V_R=0V$; $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	380 420	
I^2t	$T_{VJ}=45^{\circ}C$; $V_R=0V$; $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	1120 1120	A^2s
	$T_{VJ}=150^{\circ}C$; $V_R=0V$; $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	720 720	
T_{VJ} T_{VJM} T_{stg}		-40...+150 150 -40...+150	$^{\circ}C$
M_d	Mounting torque	0.8...1.2	Nm
	Non-Isolated		
Weight		6	g

Symbol	Test Conditions	Characteristic Values	Unit
I_R	$T_{VJ}=T_{VJM}$; $V_R=V_{RRM}$	≤ 3	mA
V_F	$I_F=45A$; $T_{VJ}=25^{\circ}C$	≤ 1.10	V
V_{To}	For power-loss calculations only	0.8	V
r_T	$T_{VJ}=T_{VJM}$	8	$m\Omega$
R_{thJC} R_{thCH}	DC current typical	0.55 0.2	K/W

Sirectifier®

SD4504 thru SD4518

Discrete Diodes

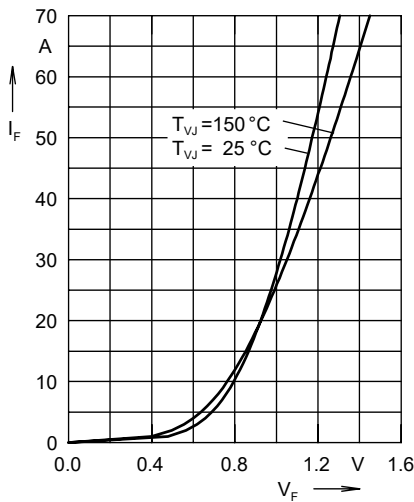


Fig.1 Forward current versus voltage drop per diode

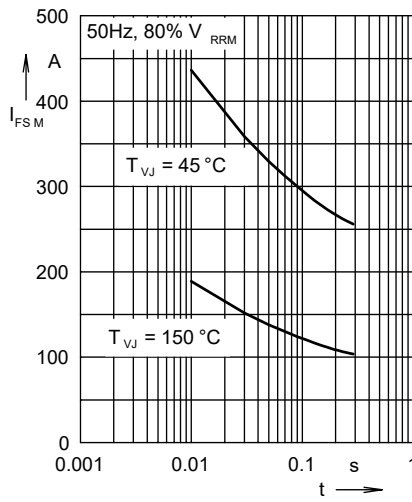


Fig. 2 Surge overload current

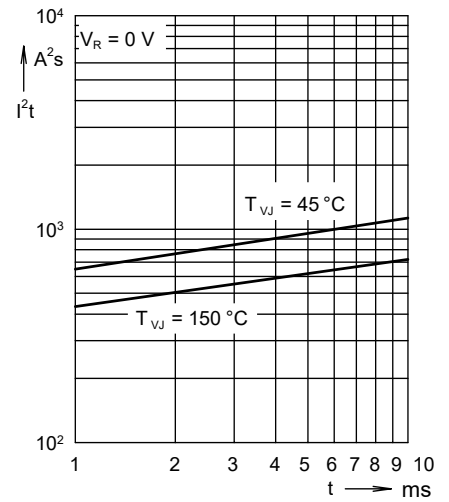


Fig.3 I^2t versus time per diode

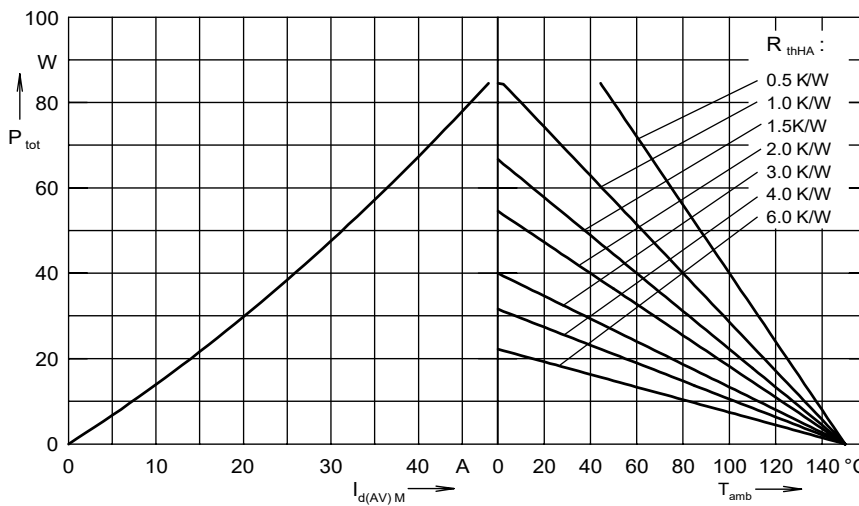


Fig.4 Power dissipation versus direct output current and ambient temperature, sine 180 °

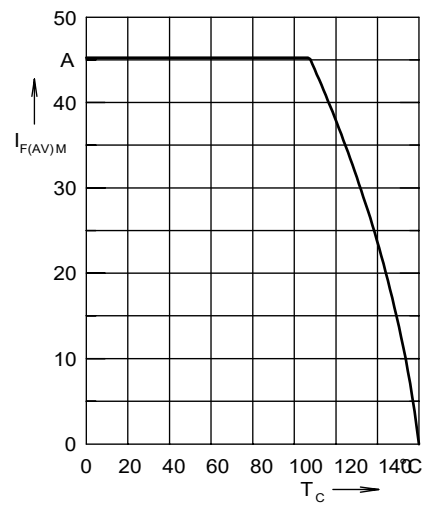


Fig.5 Max. forward current versus case temperature

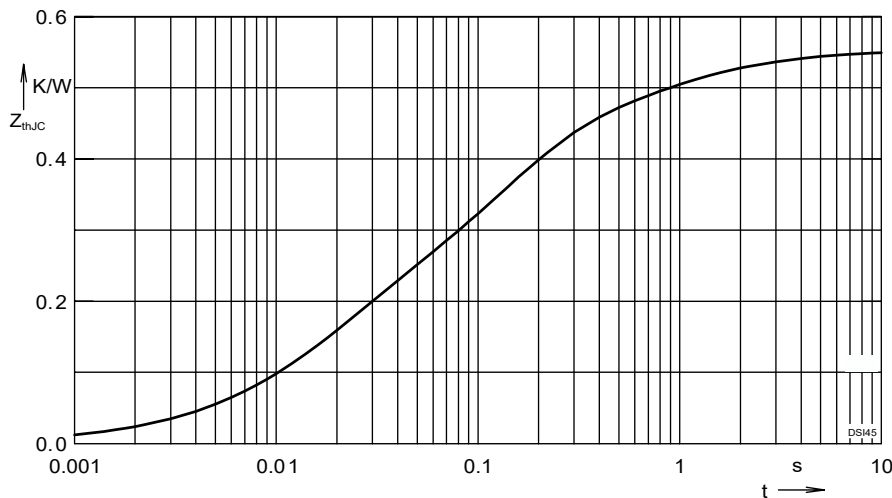


Fig.6 Transient thermal impedance junction to case

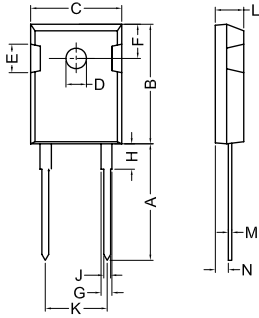
Constants for Z_{thJC} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.1633	0.016
2	0.2517	0.118
3	0.0933	0.588
4	0.04167	2.6

SD4504 thru SD4518

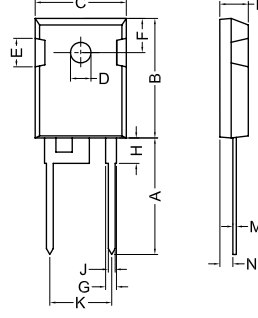
Discrete Diodes

Dimensions TO-247AC



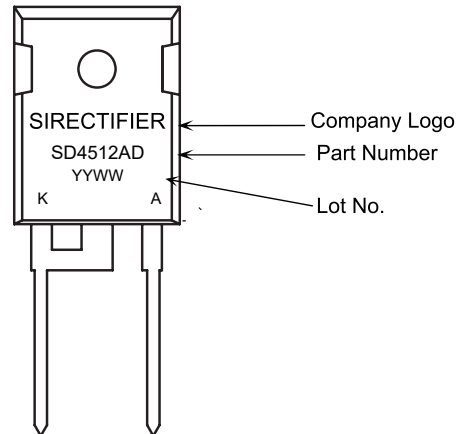
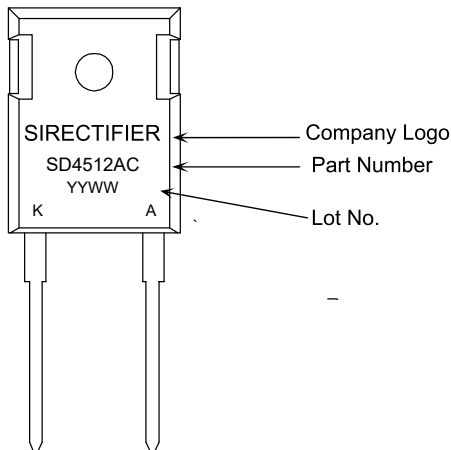
Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	19.81	20.32	0.780	0.800
B	20.80	21.46	0.819	0.845
C	15.75	16.26	0.610	0.640
D	3.55	3.65	0.140	0.144
E	4.32	5.49	0.170	0.216
F	5.4	6.2	0.212	0.244
G	1.65	2.13	0.065	0.084
H	-	4.5	-	0.177
J	1.0	1.4	0.040	0.055
K	10.8	11.0	0.426	0.433
L	4.7	5.3	0.185	0.209
M	0.4	0.8	0.016	0.031
N	1.5	2.49	0.087	0.102

Dimensions TO-247AD



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	0.610	0.640
D	3.55	3.65	0.140	0.144
E	4.32	5.49	0.170	0.216
F	5.4	6.2	0.212	0.244
G	1.65	2.13	0.065	0.084
H	-	4.5	-	0.177
J	1.0	1.4	0.040	0.055
K	10.8	11.0	0.426	0.433
L	4.7	5.3	0.185	0.209
M	0.4	0.8	0.016	0.031
N	1.5	2.49	0.087	0.102

MARKING



ORDERING INFORMATION

Part Number	Package	Shipping	Marking Code
SD4512AC	TO-247AC	30pcs / Tube	SD4512AC
SD4512AD	TO-247AD	30pcs / Tube	SD4512AD

Packing: 30pcs per tube
 20 tubes per box (=600pcs)
 6 boxes per carton (=3600pcs)