

Features

- Glass passivated chip
- Very low leakage current
- Very low forward voltage drop
- Improved thermal behaviour

Typical Application

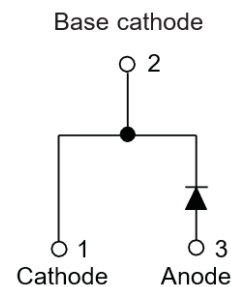
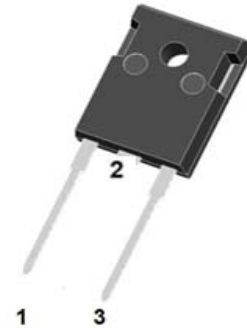
- Diode for main rectification
- For single and three phase bridge configurations

Mechanical Data

- **Package:** TO-247AC
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Backside: DBC ceramic , Soldering pins for PCB mounting , Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

TYPE	V _{RSM} V	V _{R RM} V
DSI60H160	1600	1600

TO-247-2L



Maximum Ratings

Symbol	Test Conditions	Maximum Ratings	Unit
I _{F(AV)M}	T _C =115°C; 180° sine	60	A
I _{FSM}	T _{VJ} =45°C; t=10ms (50Hz), sine	900	A
I ² t	T _{VJ} =45°C; t=10ms (50Hz), sine	1120	A ² s
	V _R =0V; t=8.3ms (60Hz), sine	1120	
	T _{VJ} =150°C; t=10ms(50Hz), sine	720	
	V _R =0V; t=8.3ms(60Hz), sine	720	
T _{VJ} T _{VJM} T _{stg}		-40...+150 150 -40...+150	°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 _{R RM}	≤ 3	mA
V _F	I _F =60A; T _{VJ} =25°C	≤ 1.10	V
V _{TO}	For power-loss calculations only	0.8	V
r _T	T _{VJ} =T _{VJM}	8	mΩ
R _{thJC} R _{thCH}	DC current typical	0.55 0.2	K/W

■ Characteristics(Typical)

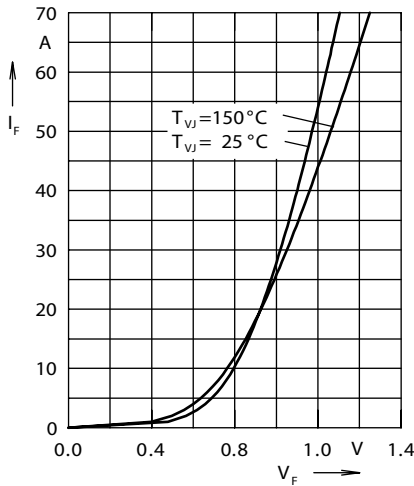


Fig. 1 Forward current versus voltage drop per diode

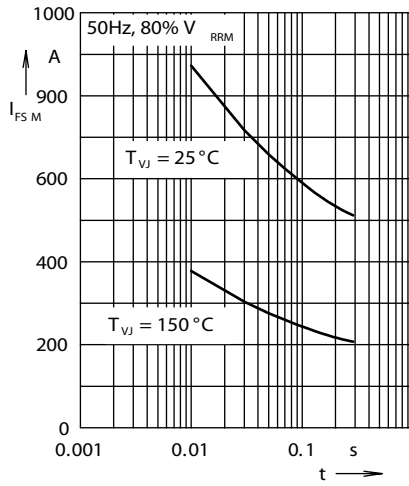


Fig. 2 Surge overload current

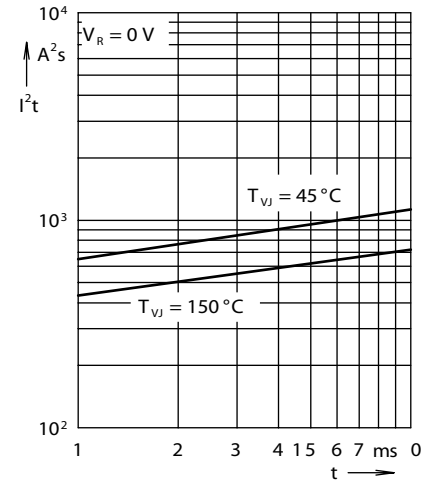


Fig. 3 I^2t versus time per diode

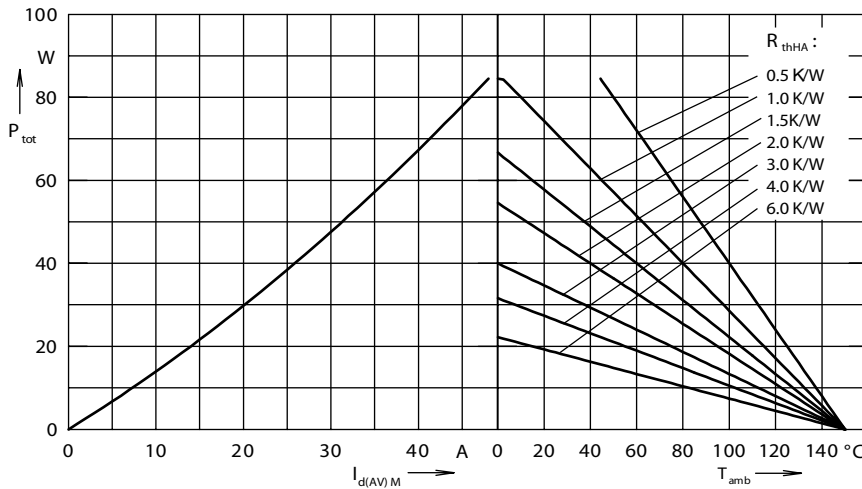


Fig. 4 Power dissipation versus direct output current and ambient temperature, sine 180°

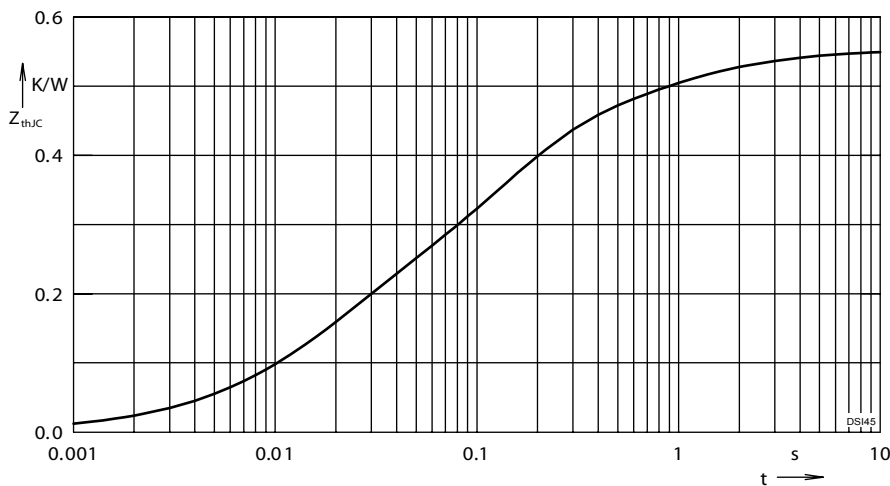
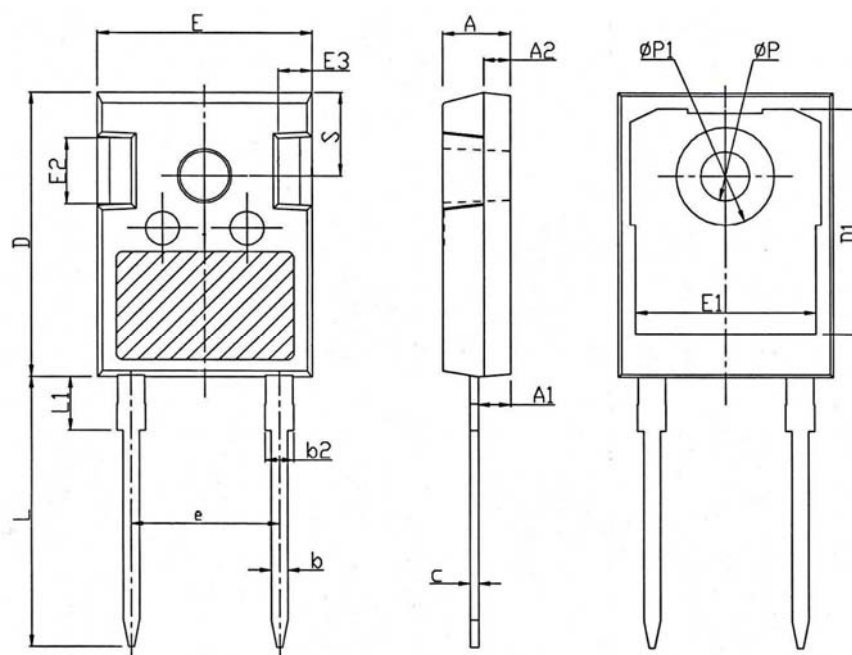


Fig. 6 Transient thermal impedance junction to case

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

■ Outline Dimensions



TO-247-2L		
Dim	Min	Max
A	4.80	5.20
A1	2.21	2.61
A2	1.85	2.15
b	1.11	1.36
b2	1.91	2.21
c	0.51	0.75
D	20.70	21.30
D1	16.25	16.85
E	15.50	16.10
E1	13.00	13.60
E2	4.80	5.20
E3	2.30	2.70
e	10.88 TYP	
L	19.62	20.22
L1	-	4.30
ϕP	3.40	3.80
$\phi P1$	-	7.30
S	6.15 TYP	

Packge	Packing	Box Size L×W×H(mm)	Quatity(pcs/box)	Carton Size L×W×H(mm)	Quatity(pcs/carton)
TO-247	30pcs/Tube	570×155×50	450	580×340×125	1800