

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

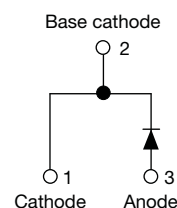
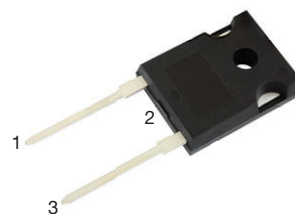
Mechanical Data • Package: TO-247-2L

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

DSI45H160	V_{RSM} V	V_{RRM} V
	1600	1600

TO-247-2L



Maximum Ratings

Symbol	Test Conditions	Maximum Ratings	Unit
$I_{F(AV)M}$	$T_C=115^{\circ}C$; 180° sine	45	A
I_{FSM}	$T_{VJ}=45^{\circ}C$; $t=10ms$ (50Hz), sine $V_R=0V$; $t=8.3ms$ (60Hz), sine	475 520	A
I^2t	$T_{VJ}=45^{\circ}C$; $t=10ms$ (50Hz), sine $V_R=0V$; $t=8.3ms$ (60Hz), sine	1120 1120	A ² s
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	$T_{VJ}=T_{VJM}$; $V_R=V_{RRM}$	≤ 3	mA
V_F	$I_F=45A$; $T_{VJ}=25^{\circ}C$	≤ 1.20	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)

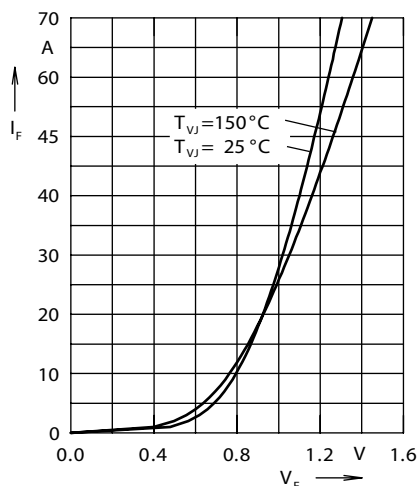


Fig. 1 Forward current versus voltage drop per diode

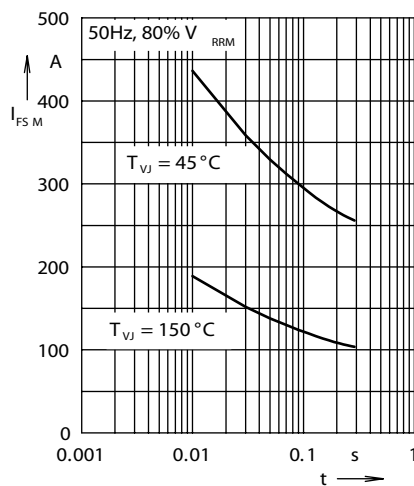


Fig. 2 Surge overload current

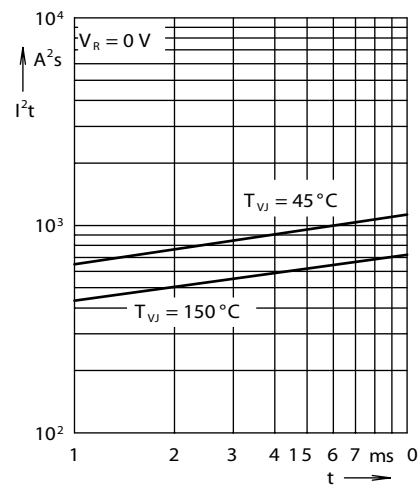


Fig. 3 I^2t versus time per diode

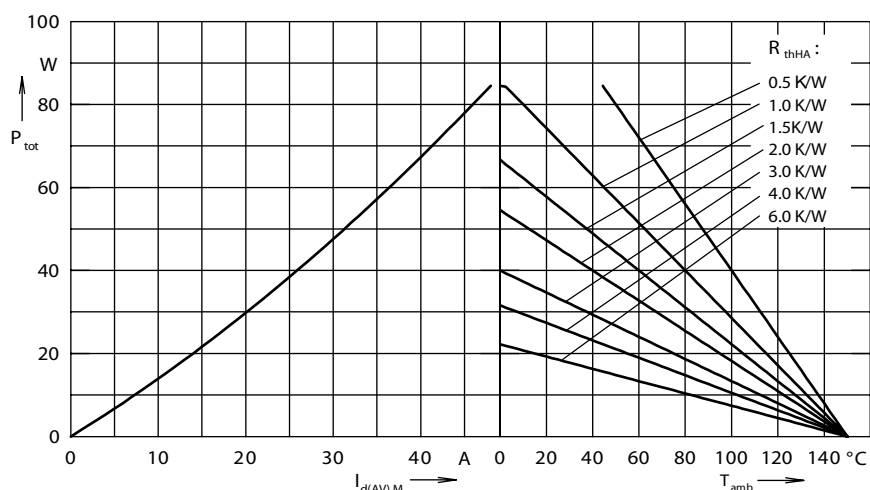


Fig. 4 Power dissipation versus direct output current and ambient temperature, sine 180°

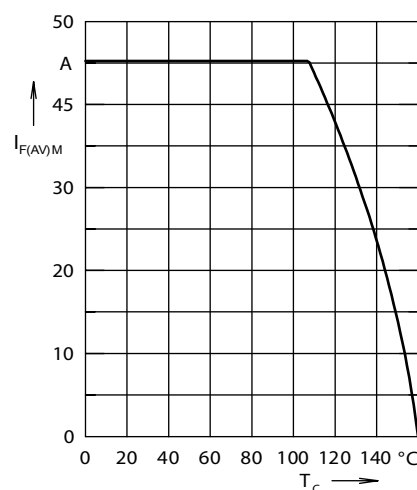


Fig. 5 Max. forward current versus case temperature

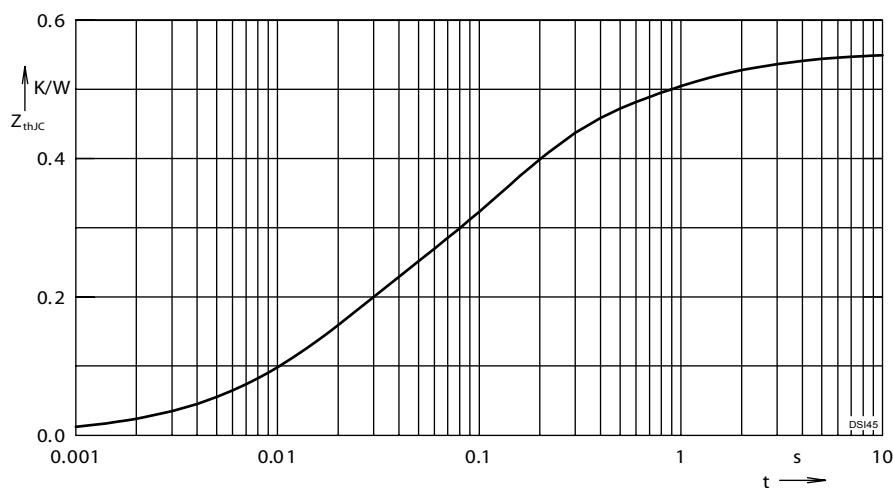
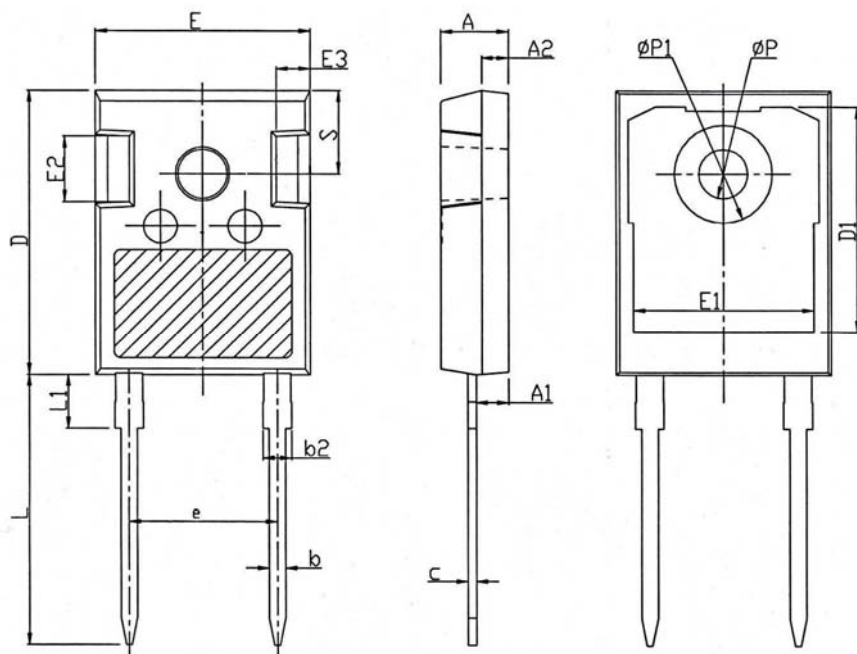


Fig. 6 Transient thermal impedance junction to case

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

■ 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
φP1	-	7.30
S	6.15 TYP	

PACKAGE	PACKING	BOX	CARTON	BOX SIZE (mm)	CARTON SIZE(mm)
TO-247	30PCS/TUBE	600PCS	3600PCS	520*110*90	540*240*290