



### Features

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

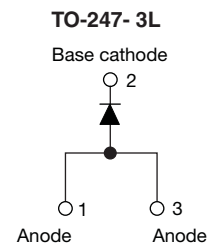
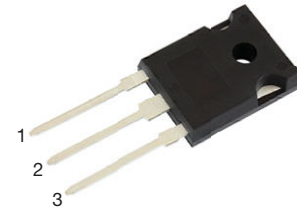
### Typical Application

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

### Mechanical Data

- **Package:** TO-247  
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

<b>DSI90H160</b>	<b>V<sub>RSM</sub></b> V	<b>V<sub>RRM</sub></b> V
	1600	1600



### Maximum Ratings

Symbol	Test Conditions	Maximum Ratings	Unit
<b>I<sub>F(AV)</sub>M</b>	T <sub>C</sub> =115°C; 180° sine	90	A
<b>I<sub>FSM</sub></b>	T <sub>VJ</sub> =45°C; V <sub>R</sub> =0V; t=10ms (50Hz), sine t=8.3ms (60Hz), sine	975 1120	A
<b>I<sup>2</sup>t</b>	T <sub>VJ</sub> =45°C; V <sub>R</sub> =0V; t=10ms (50Hz), sine t=8.3ms (60Hz), sine	2820 3120	A <sup>2</sup> s
<b>T<sub>VJ</sub></b> <b>T<sub>VJM</sub></b> <b>T<sub>stg</sub></b>		-40...+150 150 -40...+150	°C
<b>M<sub>d</sub></b>	Mounting torque	0.8...1.2	Nm
	Non-Isolated		
<b>Weight</b>		6	g

Symbol	Test Conditions	Characteristic Values	Unit
<b>I<sub>R</sub></b>	T <sub>VJ</sub> =T <sub>VJM</sub> ; V <sub>R</sub> =V <sub>RRM</sub>	≤ 5	mA
<b>V<sub>F</sub></b>	I <sub>F</sub> =90A; T <sub>VJ</sub> =25°C	≤ 1.20	V
<b>V<sub>To</sub></b>	For power-loss calculations only	0.8	V
<b>r<sub>T</sub></b>	T <sub>VJ</sub> =T <sub>VJM</sub>	3.5	mΩ
<b>R<sub>thJC</sub></b> <b>R<sub>thCH</sub></b>	DC current typical	0.55 0.2	K/W



### ■ Characteristics(Typical)

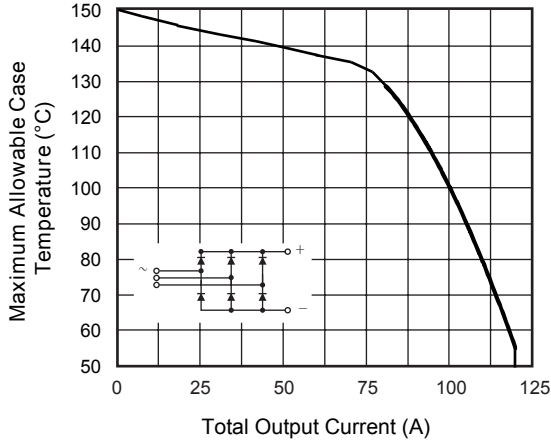


Fig. 1 - Current Ratings Characteristic

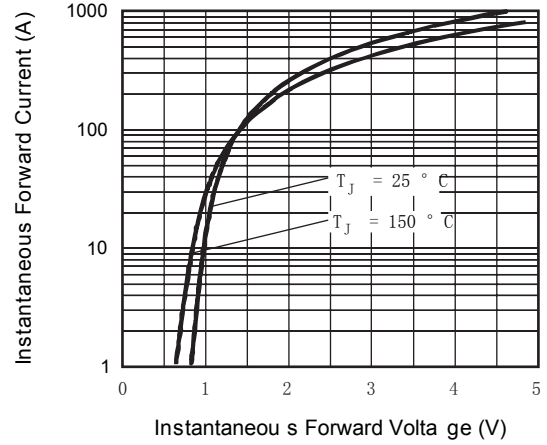


Fig. 2 - Forward Voltage Drop Characteristics

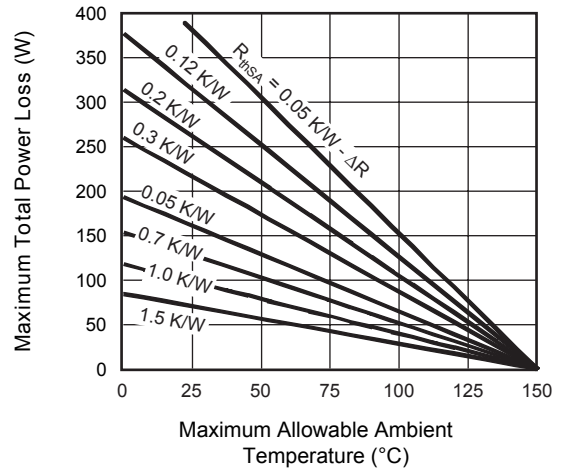
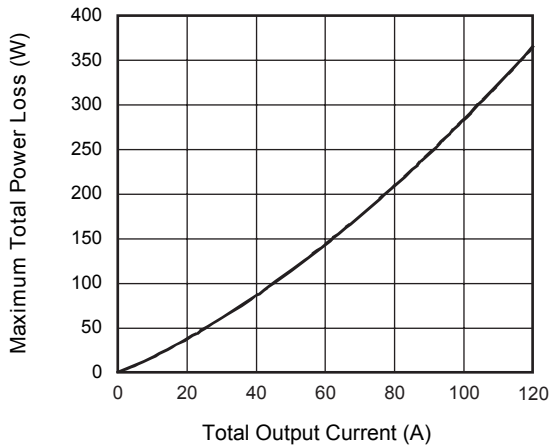


Fig. 3 - Total Power Loss Characteristics

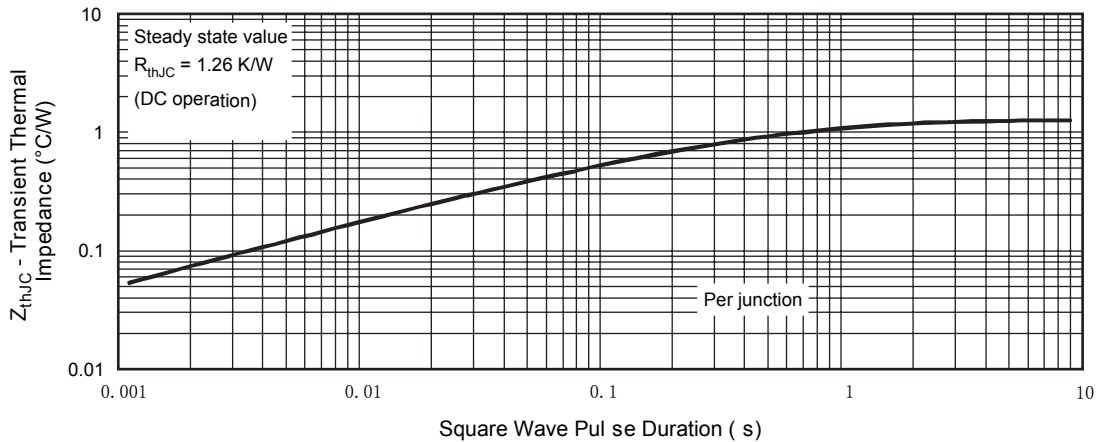
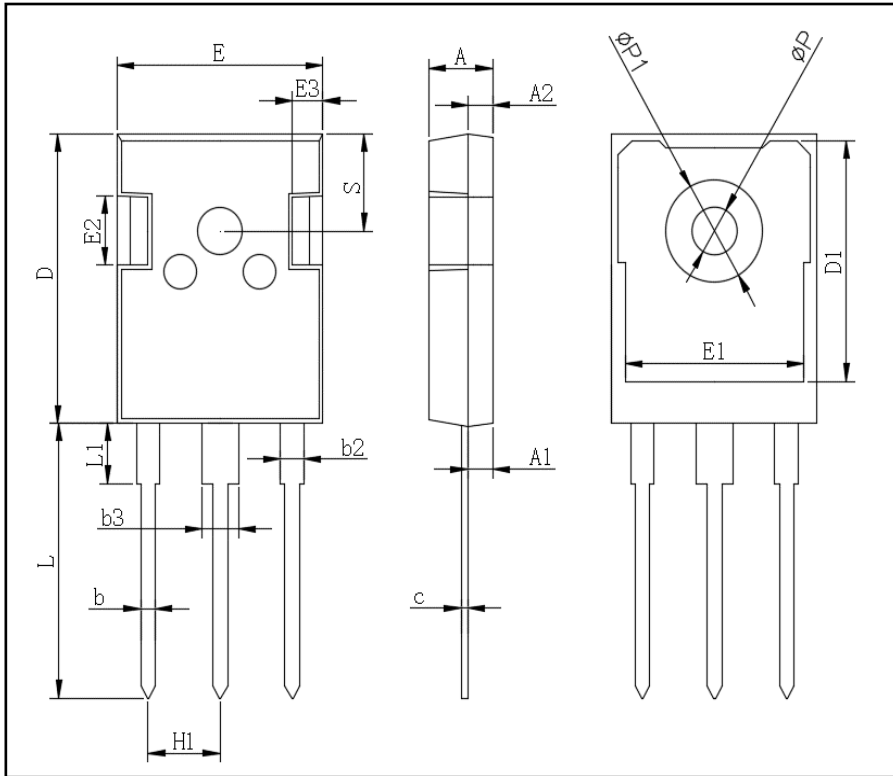


Fig.4 - Thermal Impedance  $Z_{thJC}$  Characteristic

### ■ Outline Dimensions



TO-247-3L		
Dim	Min	Max
A	4.80	5.20
A1	2.21	2.61
A2	1.85	2.15
b	1.0	1.4
b2	1.91	2.21
C	0.5	0.7
D	20.70	21.30
D1	16.25	16.85
E	15.50	16.10
E1	13.0	13.6
E2	4.80	5.20
E3	2.30	2.70
L	19.62	20.22
L1	-	4.30
ΦP	3.40	3.80
ΦP1	-	7.30
S	6.15TYP	
H1	5.44TYP	
b3	2.80	3.20

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