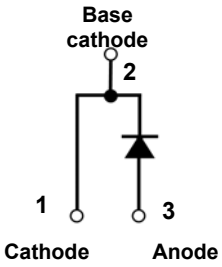
GSRA4016

General Purpose Rectifier

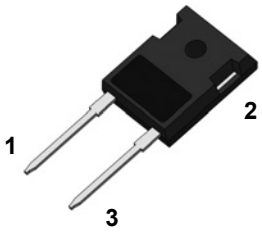
Reverse Voltage 1600V Forward Current 40A

Features

- Low forward voltage drop
- 150°C max. operating junction temperature



Schematic Diagram



TO-247-2L

Applications

- Input rectification
- Semiconductors switches and output rectifiers

Absolute Maximum Ratings and Electrical Characteristics

Parameter	Symbol	Test Conditions	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	-	1600	V
Maximum Average Forward Current	$I_{F(AV)}$	T_C=100°C, 180° conduction half sine wave	40	A
Maximum Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms single half sine wave	600	A
I^2t Value for Fusing (T_P=10ms)	I^2t	10ms sine pulse, no voltage reapplied	1131	A^2S
Maximum Forward Voltage Drop	V_{FM}	I_F=40A	1.15	V
Maximum Reverse Leakage Current	I_{RM}	T_J=25°C, V_R=Rated V_{RRM}	100	uA
		T_J=150°C, V_R=Rated V_{RRM}	1.5	mA
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	-	40	°C/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	-	0.6	°C/W
Operating Junction Temperature Range	T_J	-	-55 to +150	°C
Storage Junction Temperature Range	T_{STG}	-	-55 to +150	°C

Ratings and Characteristics Curves (T_A = 25°C unless otherwise noted)

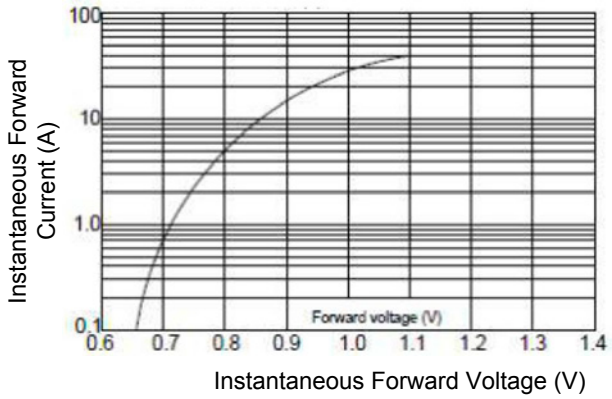


Figure 1. Typical Instantaneous Forward Characteristics

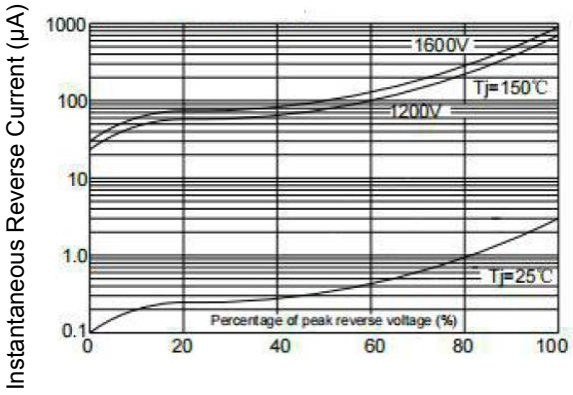


Figure 2. Typical Reverse Characteristics

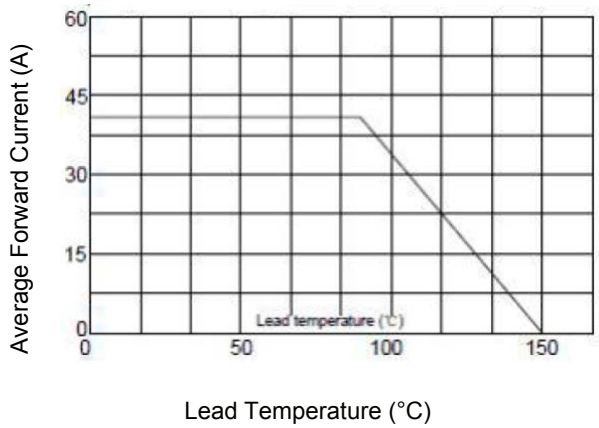


Figure 3. Forward Current Derating Curve

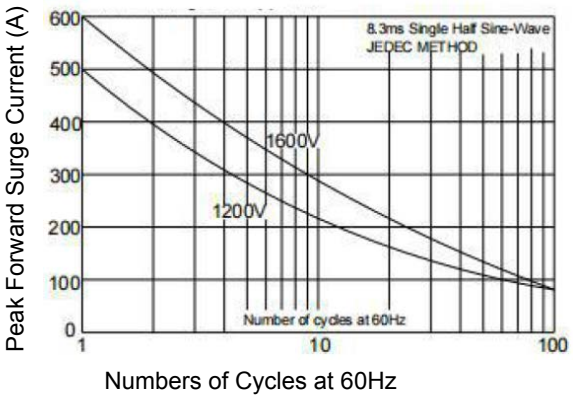
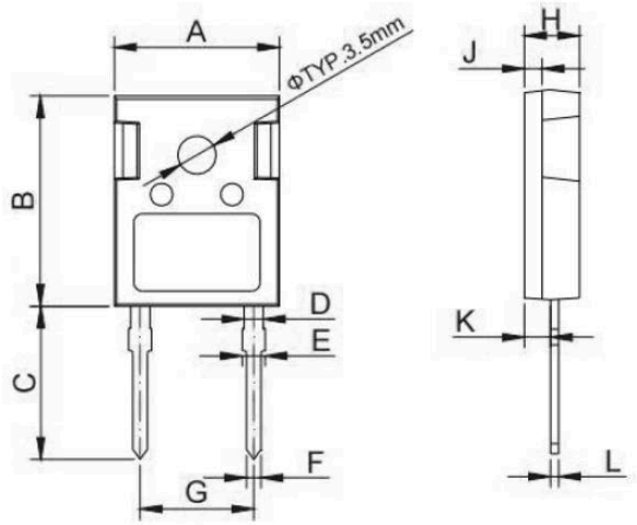


Figure 4. Maximum Non-Repetitive Forward Surge Current

Package Outline Dimensions (TO-247-2L)



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	15.500	16.100	0.610	0.634
B	20.800	21.200	0.819	0.835
C	19.700	20.300	0.776	0.799
D	1.800	2.200	0.071	0.087
E	1.900	2.300	0.075	0.091
F	1.000	1.400	0.039	0.055
G	10.880 Typ		0.428 Typ	
H	4.800	5.200	0.189	0.205
J	1.900	2.100	0.075	0.083
K	2.200	2.500	0.087	0.098
L	0.410	0.790	0.016	0.031