



# GSD61015

## RECTIFIER DIODE

Standard and reverse polarities  
Compression bonded encapsulation

**VOLTAGE UP TO** **1200 V**  
**AVERAGE CURRENT** **150 A**  
**SURGE CURRENT** **3 kA**

Symbol	A	B	C	D	E	F	G	H
Inches	0.63	0.34	0.98	1.58	0.89	4.48	0.63	0.281
mm	16.0	8.6	24.9	40.1	22.6	113.8	16.0	7.14

Strike distance .64 inch / 16.2 mm (Min)

### BLOCKING CHARACTERISTICS

Characteristic	Conditions	Value
VRRM	Repetitive peak reverse voltage	1200 V
VRSM	Non-repetitive peak reverse voltage	1300 V
IRRM	Repetitive peak reverse current, max.	VRRM, single phase, half wave, T <sub>j</sub> = T <sub>jmax</sub>
		30 mA

### FORWARD CHARACTERISTICS

I <sub>F(AV)</sub>	Average forward current	Sine wave, 180° conduction, T <sub>c</sub> = 150°C	150 A
I <sub>F(RMS)</sub>	R.M.S. forward current	Sine wave, 180° conduction, T <sub>c</sub> = 150°C	236 A
I <sub>FSM</sub>	Surge forward current	Non rep. half sine wave, 50 Hz, V <sub>R</sub> = 0 V, T <sub>j</sub> = T <sub>jmax</sub>	3 kA
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination		37.5 kA <sup>2</sup> s
V <sub>F(TO)</sub>	Threshold voltage	T <sub>j</sub> = T <sub>jmax</sub>	0.8 V
r <sub>F</sub>	Forward slope resistance	T <sub>j</sub> = T <sub>jmax</sub>	1.17 mΩ
V <sub>FM</sub>	Peak forward voltage, max	Forward current I <sub>F</sub> = 500 A, T <sub>j</sub> = 25°C	1.38 V

### SWITCHING CHARACTERISTICS

Q <sub>rr</sub>	Reverse recovery charge	T <sub>j</sub> = T <sub>jmax</sub> , I <sub>F</sub> = A, t <sub>p</sub> = μs, di/dt = A/μs	μC
I <sub>rr</sub>	Reverse recovery current	V <sub>R</sub> = V, dV/dt = V/μs	A
t <sub>rr</sub>	Reverse recovery time		μs
V <sub>FP</sub>	Forward recovery voltage	T <sub>j</sub> = T <sub>jmax</sub> , di/dt = A/μs	V

### THERMAL AND MECHANICAL CHARACTERISTICS

R <sub>th(j-c)</sub>	Thermal resistance (junction to case)	Double side cooled	0.28 °C/W
R <sub>th(c-h)</sub>	Thermal resistance (case to heatsink)	Double side cooled	0.15 °C/W
T <sub>jmax</sub>	Max operating junction temperature		200 °C
T <sub>stg</sub>	Storage temperature		-65 / 200 °C
M	Mounting torque		12.5 N·m
	Mass		100 g