



# GMG1...N..

## SINGLE-PHASE RECTIFIER BRIDGE

- Low thermal resistance
- Electrically insulated package
- Versatile pin out
- High output current

**VOLTAGE UP TO** **1600 V**  
**OUTPUT CURRENT UP TO** **60 A**



### BLOCKING CHARACTERISTICS

**GMG116N40 GMG116N60**

Characteristic		Conditions	Value	Value
V <sub>RRM</sub>	Repetitive peak reverse voltage		1200-1600V	1200-1600V
V <sub>RSM</sub>	Repetitive peak off-state voltage		1700 V	1700 V
I <sub>RRM</sub>	Repetitive peak reverse current, max.	V <sub>R</sub> , single phase, half wave, T <sub>j</sub> = T <sub>jmax</sub>	2 mA	2 mA
V <sub>INS</sub>	RMS insulation voltage	Any terminal to base - 60 s	3000 V	3000 V

### FORWARD CHARACTERISTICS

I <sub>o(AV)</sub>	Average DC output current	T <sub>c</sub> = 80 °C	40 A	60 A
I <sub>FSM</sub>	Surge current	Non rep. half sine wave, 50 Hz,	360 A	540 A
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination	V <sub>R</sub> = 0 V, T <sub>j</sub> = T <sub>jmax</sub>	0.648 kA <sup>2</sup> s	1.458 kA <sup>2</sup> s
V <sub>F(TO)</sub>	Threshold voltage	T <sub>j</sub> = T <sub>jmax</sub>	1.0 V	1.0 V
r <sub>F</sub>	Forward slope resistance	T <sub>j</sub> = T <sub>jmax</sub>	7.52 mΩ	3.91 mΩ
V <sub>FM</sub>	Forward voltage, max	Forward current I <sub>F</sub> = 50 A, T <sub>j</sub> = T <sub>jmax</sub>	1.38 V	1.20 V

### THERMAL AND MECHANICAL CHARACTERISTICS

R <sub>th(j-c)</sub>	Thermal resistance (junction to case)	Per junction / per bridge	1.5/0.37 °C/W	1.3/0.32 °C/W
R <sub>th(c-h)</sub>	Thermal resistance (case to heatsink)		0.12 °C/W	0.12 °C/W
T <sub>jmax</sub>	Operating junction temperature		-40 / 150 °C	-40 / 150 °C
F	Mounting torque +/- 10%		4.5 N·m	4.5 N·m
	Mass		90 g	90 g

### Voltage rating

Type number	Voltage code	V <sub>RRM</sub>	V <sub>RSM</sub>
GMG1	12	1200V	1300V
	14	1400V	1500V
	16	1600V	1700V

