



GMG316D09

THREE-PHASE RECTIFIER BRIDGE

- Low thermal resistance
- Electrically insulated package
- High output current

VOLTAGE UP TO 1600 V
OUTPUT CURRENT UP TO 90 A

BLOCKING CHARACTERISTICS

Characteristic	Conditions	Value
V_{RRM}	Repetitive peak reverse voltage	1600 V
V_{RSM}	Repetitive peak off-state voltage	1700 V
I_{RRM}	Repetitive peak reverse current, max.	V_R , single phase, half wave, $T_j = T_{jmax}$
V_{INS}	RMS insulation voltage	Any terminal to base - 60 s

FORWARD CHARACTERISTICS

$I_{O(AV)}$	Average DC output current	$T_c = 108\text{ }^\circ\text{C}$ - Solder connection	90 A
I_{FSM}	Surge current	Non rep. half sine wave, 50 Hz, $V_R = 0\text{ V}$, $T_j = T_{jmax}$	930 A
I^2t	I^2t for fusing coordination		3.18 kA ² s
$V_{F(TO)}$	Threshold voltage	$T_j = 25\text{ }^\circ\text{C}$	1.0 V
r_F	Forward slope resistance	$T_j = 25\text{ }^\circ\text{C}$	3.91 m Ω
V_{FM}	Forward voltage, max	Forward current $I_F = 100\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$	1.36 V

THERMAL AND MECHANICAL CHARACTERISTICS

$R_{th(j-c)}$	Thermal resistance (junction to case)	Per bridge	0.17 $^\circ\text{C/W}$
$R_{th(c-h)}$	Thermal resistance (case to heatsink)		0.12 $^\circ\text{C/W}$
T_{jmax}	Operating junction temperature		-40 / 150 $^\circ\text{C}$
M_1	Mounting torque +/- 15%	Module to heatsink (M5)	4.5 N·m
M_2	Mounting torque +/- 15%	Busbar to terminal (M5)	3.0 N·m
	Mass		100 g

