

CURRENT 50 Ampere
 VOLTAGE RANG 45 Volts

GMK5045

MAIN CHARACTERISTICS

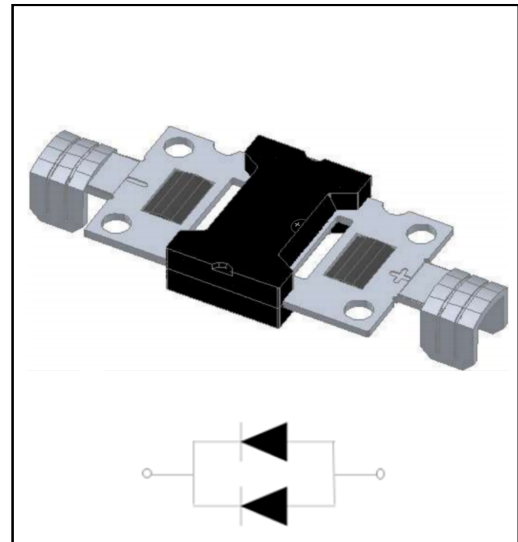
I_o	50 A
V_{RRM}	45 V
T_j	150 °C
$V_{F(typ)}$	0.52V

FEATURES

- Schottky Barrier high diode;
- Low thermal resistance;
- Lower forward voltage drop, low power loss;
- Isolate Package design, ideal for heat dispersion;
- High forward current capability;
- Excellent anti-humidity;
- Low profile package;
- High forward surge capability;

Mechical Data

- Case: HPMS-1;
- Terminals: Copper;
- High temperature soldering guaranteed;
 Heated-tool welding 260°C, 10seconds
- Marking: As marked on product;



MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	GMK5050	Unit
V_{RRM}	Peak repetitive reverse voltage	45	V
V_{RWM}	Working peak reverse voltage		
V_R	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	31.5	V
I_o	Average rectified output current@60Hz half sine-wave, R-load, $T_a=25^\circ\text{C}$	50	A
I_{FSM}	Non-Repetitive peak forward surge current (8.3ms half sine wave)	700	A
i^2t	Rating for fusing ($t<8.3\text{ms}$)	2033.5	A^2S
$R_{\theta jc}$	Thermal resistance from junction to case	1.5	$^\circ\text{C}/\text{W}$
T_j	Junction temperature IN DC Forward Mode-Forward Operations, without reverse bias, $t \leq 1 \text{ h}$ (1)	-55~+150	$^\circ\text{C}$
T_{stg}	Storage temperature	-55~+150	$^\circ\text{C}$

NOTE: (1) Meets the requirements of IEC 61215 Ed. 2 bypass diode thermal test.

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

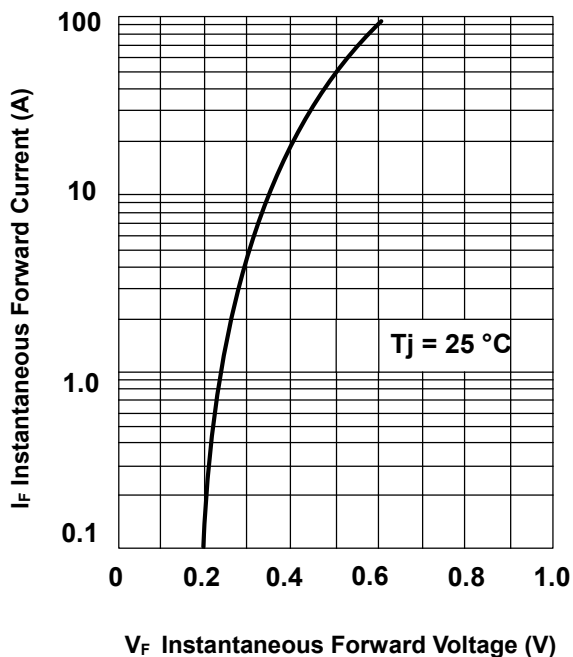
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=1\text{mA}$	50			V
Reverse current	I_R	$V_R=45\text{V}$	$T_j=25^\circ\text{C}$	20	100	μA
			$T_j=100^\circ\text{C}$		15	mA
Forward voltage	V_F	$I_F=60\text{A}$ $T_j=25^\circ\text{C}$		0.52	0.55	V

*Pulse test: pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2.0\%$.

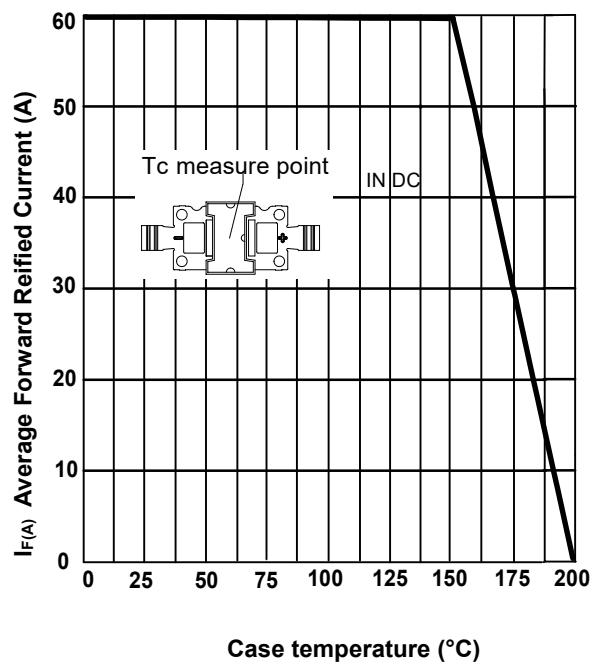
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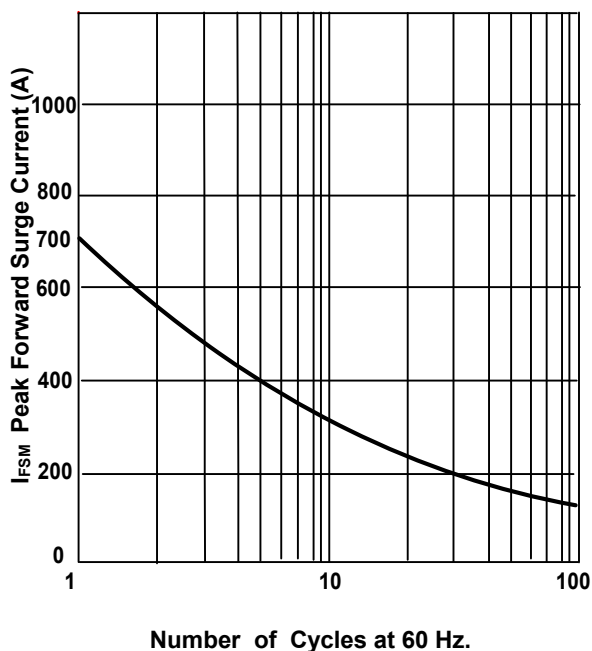
TYPICAL FORWARD CHARACTERISTIC



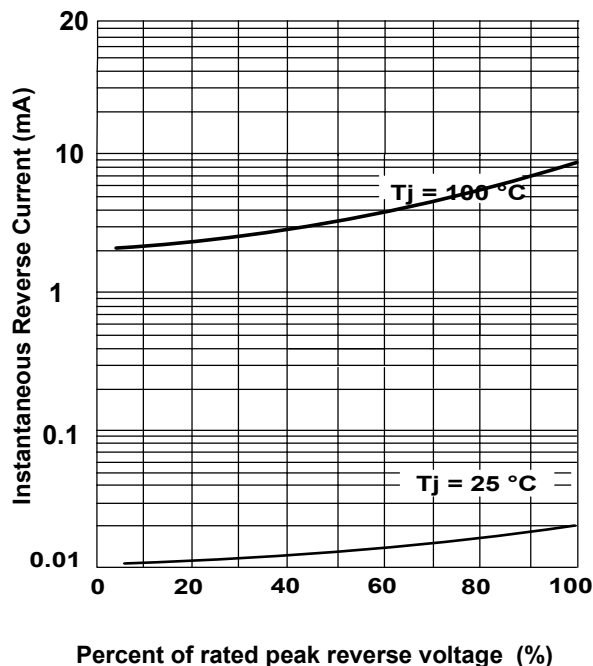
FORWARD CURRENT DERATING CURVE



MAXIMUM NON REPETITIVE PEAK FORWARD SURGE CURRENT

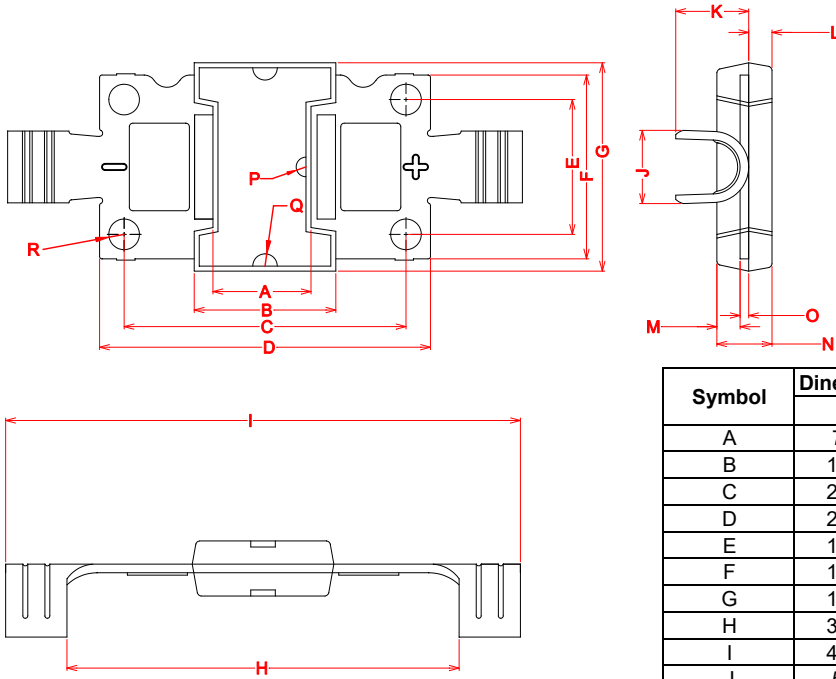


MAXIMUM NON REPETITIVE SURGE CURRENT



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Symbol	Dinemsions In Millimeters		Dinemsions In Inches	
	Min	Max	Min	Max
A	7.800	8.200	0.307	0.323
B	11.350	11.750	0.447	0.463
C	22.500	23.500	0.886	0.925
D	26.500	27.500	1.043	1.083
E	10.500	11.500	0.413	0.453
F	14.500	15.500	0.571	0.610
G	16.500	17.500	0.650	0.689
H	31.500	32.500	1.240	1.280
I	41.500	42.500	1.634	1.673
J	5.700	6.300	0.224	0.248
K	5.750	6.150	0.226	0.242
L	1.700	2.100	0.067	0.083
M	1.700	2.100	0.067	0.083
N	4.300	4.700	0.169	0.185
O	0.600	0.800	0.024	0.031
P	0.800 TYP		0.031 TYP	
Q	1.000 TYP		0.039 TYP	
R	1.250 TYP		0.049 TYP	

Ordering Information

PREFERED P/N	TUBE(pcs)	CARTON(pcs)
GMK5045	30	1500