

CURRENT 40 Ampere  
 VOLTAGE RANG 45 Volts

## GMK4045

### MAIN CHARACTERISTICS

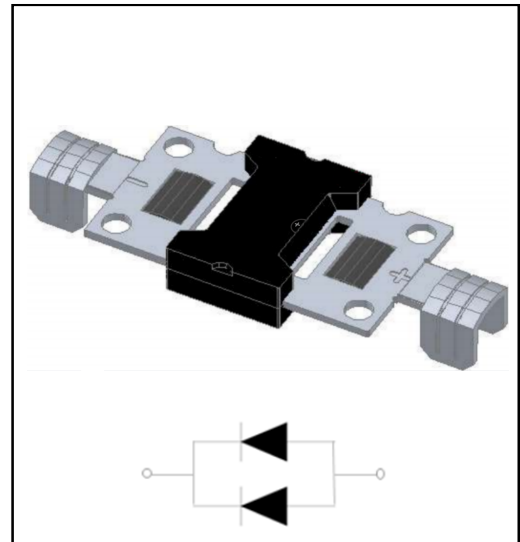
$I_o$	40 A
$V_{RRM}$	45 V
$T_j$	150 °C
$V_{F(typ)}$	0.52V

### 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:HYX09E
- 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	GMK4045	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, $T_a=25^\circ\text{C}$	40	A
$I_{FSM}$	Non-Repetitive peak forward surge current (8.3ms half sine wave)	600	A
$i^2t$	Rating for fusing ( $t<8.3\text{ms}$ )	2033.5	$\text{A}^2\text{S}$
$R_{\theta jc}$	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)

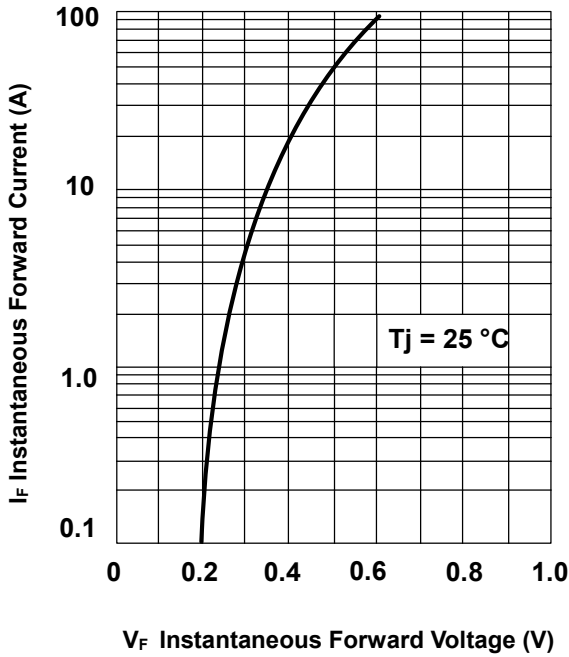
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=1\text{mA}$	45			V
Reverse current	$I_R$	$V_R=45\text{V}$	$T_j=25^\circ\text{C}$	20	100	$\mu\text{A}$
			$T_j=100^\circ\text{C}$		15	$\text{mA}$
Forward voltage	$V_F$	$I_F=20\text{A}$ $T_j=25^\circ\text{C}$		0.52	0.55	V

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

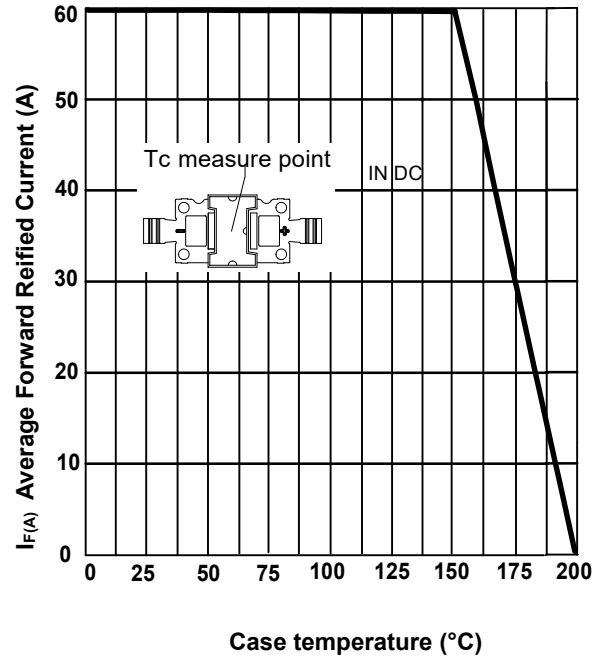
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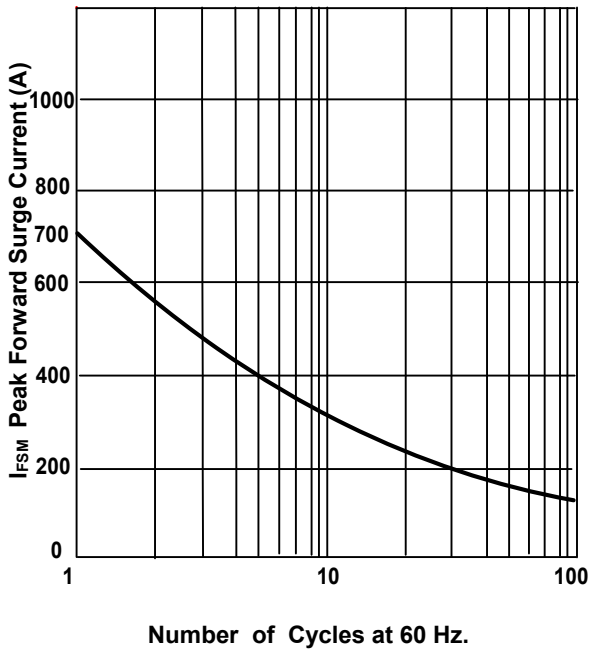
TYPICAL FORWARD CHARACTERISTIC



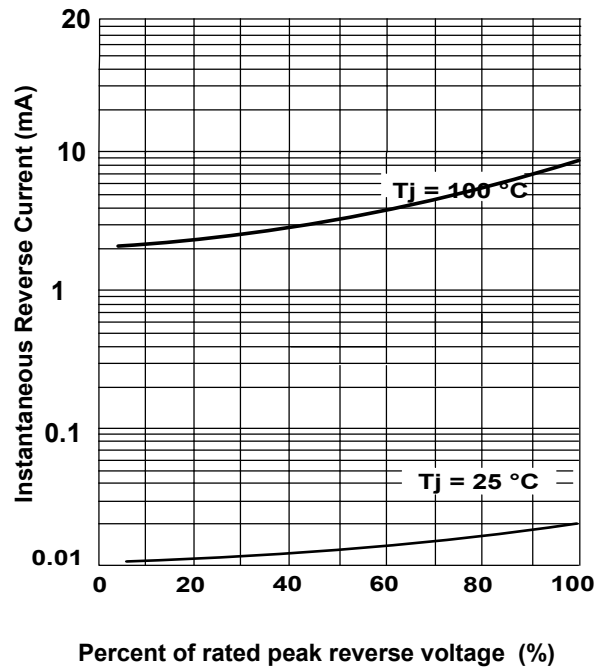
FORWARD CURRENT DERATING CURVE



MAXIMUM NON REPETITIVE PEAK FORWARD SURGE CURRENT

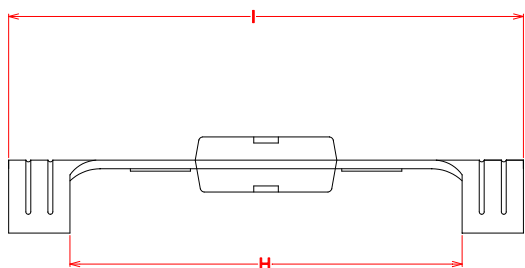
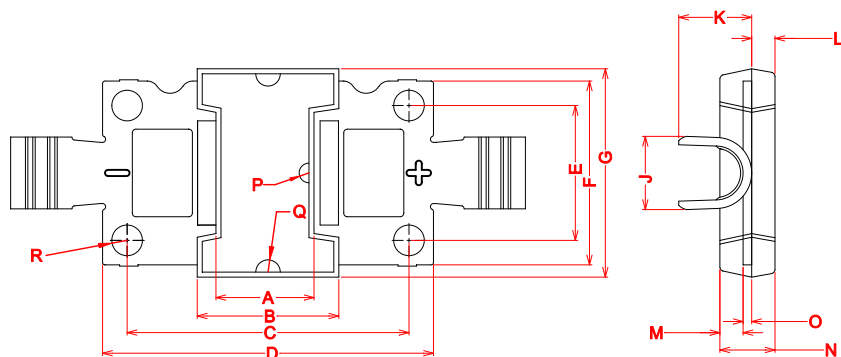


MAXIMUM NON REPETITIVE SURGE CURRENT



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## GMK4045



Symbol	Dinensions In Millimeters		Dinensions 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)
GMK4045	30	1500