30MT045

Bypass Diode Module For PV

康比電子 HORNBY ELECTRONIC

REVERSE VOLTAGE: **45 VOLTS**

FORWARD CURRENT: **30.0 AMPERE**

FEATURES

· Metal of silicon rectifier, majority carrier conduction

· Guard ring for transient protection

· Low power loss, high efficiency

· High current capability, low IR

· High surge capacity

· High temperature reverse characteristic is excellent

· For use in photovoltaic solar cell protection

MT09E

MECHANICAL DATA

Case: Molded plastic, MT09E

Epoxy: UL 94V-O rate flame retardant

Polarity: As marked

Mounting position: Any

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60H_Z, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	*30MT045*	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	**Volts**
Maximum RMS Voltage	V_{RMS}	31.5	**Volts**
Maximum DC Blocking Voltage	V_{DC}	45	**Volts**
Maximum Average Forward Rectified Current at T_C = 125°C	$I_{(AV)}$	30.0	**Amp**
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	400	**Amp**
Maximum Forward Voltage (Note 1) at I_F = 30A, T_C = 25°C at I_F = 30A, T_C =125°C	V_F	0.51 0.44	**Volts**
Maximum Reverse Current at Rated DC Blocking Voltage at T_J=25℃ T_J=100℃	I_R	0.1 100	**mAmp**
Typical Thermal Resistance	R_{0JC}	1.5	℃/W
Operating Junction Temperature Range	T_{OP}	-55 to +150	℃
Junction Temperature in DC Forward Current Without Reverse Bias. T ≤ 1 hour (Note 3)	T_J	-55 to +200	℃
Storage Temperature Range	Tstg	-55 to +150	℃

NOTES:

1- 300us Pulse Width, 2%Duty Cycle.

2- Thermal Resistance Junction to Case. Without Heatsink.

3- Meets The Requiements Of IEC 61215 ed. 2 Bypass Diode Thermal Test.

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RATINGS AND CHARACTERISTIC CURVES

FIG. 1-FORWORD CURRENT DERATING CURVE

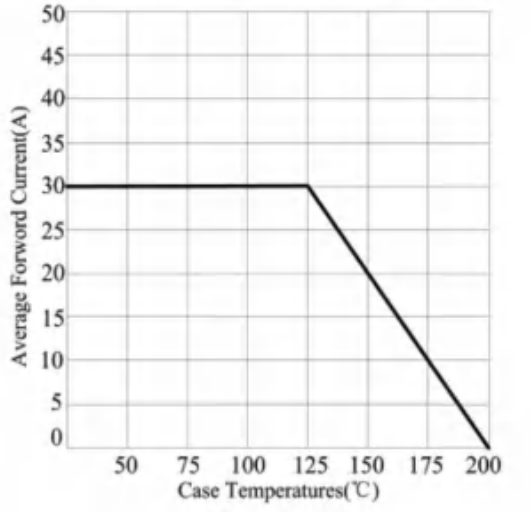


FIG. 2- MAXIMUM NON-REPETIVE SURGE

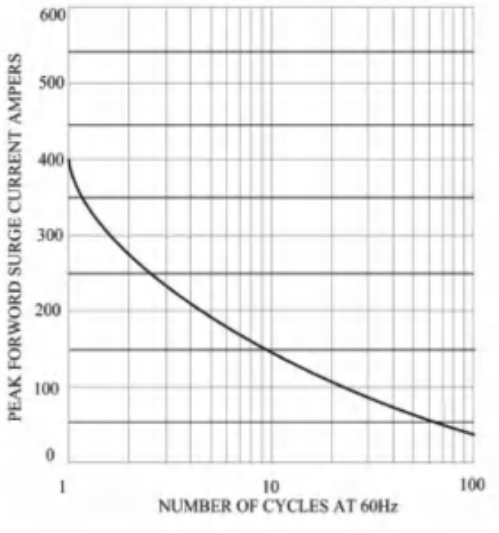


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

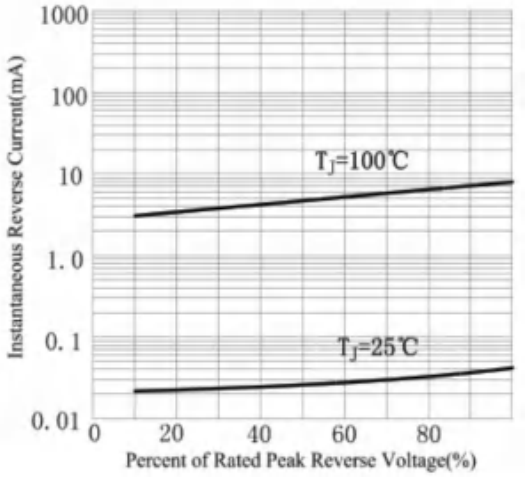
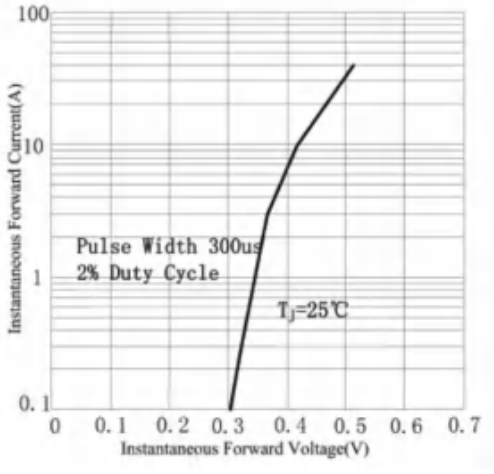


FIG. 4-TYPICAL FORWARD CHARACTERISTICS



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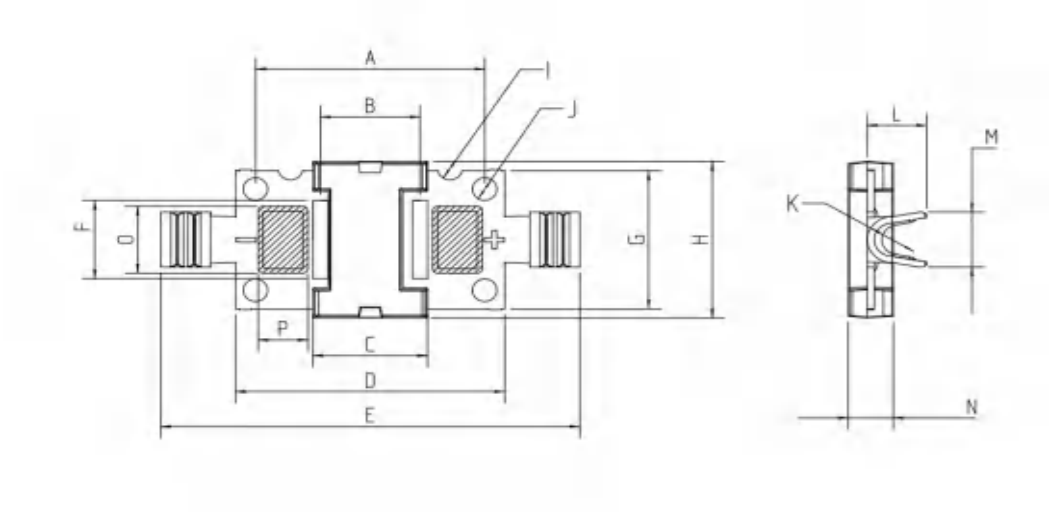
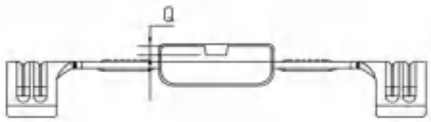
OUTLINE DIMENSIONS





DIM	mm		inch		NOTE
	MIN	MAX	MIN	MAX	
A	22.90	23.10	0.902	0.909	
B	9.10	10.10	0.358	0.398	
C	11.40	11.60	0.449	0.457	
D	26.90	27.10	1.059	1.067	
E	41.90	42.10	1.650	1.657	
F	8.40	8.60	0.331	0.339	
G	14.90	15.10	0.587	0.594	
H	16.90	17.10	0.665	0.673	
I	2.49	2.51	0.098	0.099	
J	2.49	2.51	0.098	0.099	
K	3.50	4.50	0.138	0.177	
L	5.50	6.20	0.217	0.244	
M	5.93	6.10	0.233	0.240	
N	4.40	4.60	0.173	0.181	
O	6.80	7.40	0.268	0.291	
P	4.40	5.20	0.173	0.205	
Q	0.67	0.73	0.026	0.029	