# Bypass Diode Module for Solarcell
## (Schottky Barrier Diode Type)

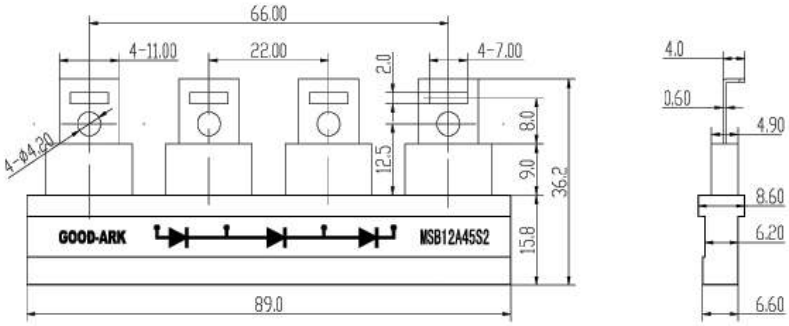
**Reverse Voltage** 45V
**Forward Current** 12A

**Outline Drawing**

**internal schematic diagram**

## Features

- ·Low thermal resistance
- ·Low forward voltage drop,low power loss
- Compact outline design
- ·Excellent anti-humidity
- ·High current capability
- ·High forward surge capability
- ·RoHS compliance




**Dimensions in millimeters**

## Mechanical Data

**Case:** plastic body

**Terminals:** Sn plated leads

## Typical Applications

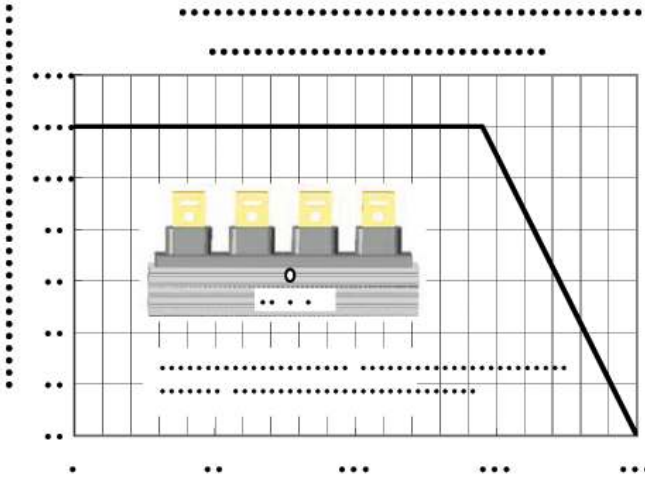
- ·For use in solar cell junction box as bypass diodes for protection, using DC forward current without reverse bias.

## Maximum Ratings & Electrical Characteristics Ratings at 25· ·ambient temperature unless otherwise specified

| Parameter | Symbol | MSB15A45S | Unit |
|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 45 | V |
| Working peak reverse voltage | $V_{RwM}$ | 45 | V |
| DC output current (Tc=145· ·with special heatsink) | $I_F$ | 12 | A |
| Surge forward current 1cycle,60HZ,peak value,non- | $I_{FSM}$ | 400 | A |
| Repetitive peak reverse current ($V_R$=$V_{RRM}$) | $I_{RRM\ (Max)}$ | 0.25 | mA |
| Forward voltage drop $I_F$=12A,Inst measurement | $V_{FM\ (Max)}$ | 0.5 | V |
| Typical thermal resistance (junction to case,with heatsink) | Rθjc | 1.0 | · /W |
| Operating junction temperature range(VR· 80%VRRM) | $T_J$ | · 55 to+150 | · · |
| Junction temperature in DC forward current without reverse bias | | 200 | · · |
| Storage temperature | Tstg | · 55 to+150 | · · |
| Isolation voltage AC. 1minute | $V_{ISO}$ | 6000 | V |
| Mass (typical value) | | 30 | g |

## Ratings & Characteristics Curves

(Ta=25• •unless otherwise noted )



**Notes:**

Mounted on junction box

Using DC forward current