

# YJ Planar Schottky Barrier Diode Die Specification

40V 15A, 105mil, Schottky barrier diode die based on silicon planar process  
Part No.: PSB105M045SS-280A

## Main Products Characterstics

### Maximum Ratings

|           |                      |              |
|-----------|----------------------|--------------|
| Symbol    | Parameter            | Value        |
| $I_F$     | Forward Current      | 15 A         |
| $V_F$     | Forward Voltage      | 0.45 V       |
| $I_{RMS}$ | RMS Reverse Current  | 100 $\mu$ A  |
| $V_R$     | Reverse Voltage      | 40 V         |
| $T_J$     | Junction Temperature | 175 °C       |
| $T_{stg}$ | Storage Temperature  | -55 ~ 175 °C |

### Static Electrical Characteristics (Ta = 25°C)

|           |                          |              |
|-----------|--------------------------|--------------|
| Symbol    | Parameter                | Value        |
| $I_F$     | Forward Current          | 15 A         |
| $V_F$     | Forward Voltage          | 0.45 V       |
| $I_{RMS}$ | RMS Reverse Current      | 100 $\mu$ A  |
| $V_R$     | Reverse Voltage          | 40 V         |
| $T_J$     | Junction Temperature     | 175 °C       |
| $T_{stg}$ | Storage Temperature      | -55 ~ 175 °C |
| $\eta$    | Rectification Efficiency | $\geq 2\%$   |

## Device Schematics and Outline Drawing

|                 |                                                   |              |
|-----------------|---------------------------------------------------|--------------|
| Symbol          | Parameter                                         | Value        |
| $I_F$           | Forward Current                                   | 15 A         |
| $V_F$           | Forward Voltage                                   | 0.45 V       |
| $I_{RMS}$       | RMS Reverse Current                               | 100 $\mu$ A  |
| $V_R$           | Reverse Voltage                                   | 40 V         |
| $T_J$           | Junction Temperature                              | 175 °C       |
| $T_{stg}$       | Storage Temperature                               | -55 ~ 175 °C |
| $\eta$          | Rectification Efficiency                          | $\geq 2\%$   |
| Die Thickness * |                                                   |              |
| Die Size **     |                                                   |              |
| Top Metal Pad   |                                                   |              |
| Active Area     |                                                   |              |
| Top Metal       |                                                   |              |
| Back Metal      |                                                   |              |
| Note:           | 1 * : Also can offer device with 8 mils thickness |              |
|                 | 2 **: Cutting street width is around 1.5 mils     |              |

## Important Notice

|                                                                                                           |                                                                             |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Specification apply to die only. Actual performance may degrade when assembled.                           | Recommended Storage Environment:                                            |
| does not guarantee device performance after assembly.                                                     | Store in original container, in dessicated nitrogen, with no contamination. |
| All operating parameters must be validated for each customer application by customer's technical experts. | Shelf life for parts stored in above condition is 2 years.                  |
| Data sheet information is subjected to change without notice.                                             |                                                                             |