

# YJ Planar Schottky Barrier Diode Die Specification

60V 3A, 55mil, Schottky barrier diode die based on silicon planar process  
Part No.: PSB055M060SS-280B

## Main Products Characteristics

- Average forward current:  $I_{F(AV)} = 3\text{ A}$
- Maximum operating junction temperature:  $T_j = 150\text{ }^\circ\text{C}$
- ESD rating: >8KV, per IEC61000-4-2 (Contact Discharge)
- Top metal: Ag



## Maximum Ratings

| Parameter   | Symbol      | Rating                       |
|---|-------------|------------------------------|
| Repetitive peak reverse voltage   | $V_{RRM}$   | 60 V                         |
| Average forward current   | $I_{F(AV)}$ | 3 A                          |
| Non-repetitive peak surge current<br>( $t_p = 8.3\text{ ms}$ , halfwave, 1 cycle) | $I_{FSM}$   | 80 A                         |
| Storage temperature range   | $T_{stg}$   | -50 to +150 $^\circ\text{C}$ |
| Maximum operating junction temperature  | $T_j$       | 150 $^\circ\text{C}$         |

## Static Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

| Parameter  | Symbol   | Value |         |
|--|----------|-------|---------|
|  |          | Spec  | Typical |
| Reverse breakdown voltage<br>$I_R = 1\text{ mA}$   | $V_{BR}$ | 65 V  | 72V     |
| Maximum forward voltage drop<br>$I_F = 3\text{ A}$<br>Pulse Test: $t_p = 300\text{ }\mu\text{s}$ , $\delta \leq 2\%$ | $V_F$    | 0.65V | 0.6V    |
| Maximum reverse current<br>$V_R = V_{RRM}$<br>Pulse Test: $t_p = 300\text{ }\mu\text{s}$ , $\delta \leq 2\%$         | $I_R$    | 50uA  | 15uA    |

## Device Schematics and Outline Drawing

The top view shows a square die with a central 'Active Area' surrounded by three concentric rings: 'First Ring', 'Second Ring', and 'Third Ring'. A 'Top Metal Pad' is located at the top. The 'Die Size' is indicated by a dashed line. The cross-section shows layers from top to bottom: 'Top Metal', 'Schottky Barrier', 'SiO2', 'Epi', 'Guard Ring', 'Back Metal', and 'Substrate'.

|                 |         |
|-----------------|---------|
| Die Thickness * | 11 Mils |
| Die Size **     | 55 Mils |
| Top Metal Pad   | 50 Mils |
| Active Area     | 46 Mils |
| Top Metal       | Ag      |
| Back Metal      | Ag      |

Note: 1 \* : Also can offer device with 8 mils thickness  
2 \*\*: Cutting street width is around 1.5 mils

## Important Notice

|   |  |
|---|--|
| <p>Specification apply to die only. Actual performance may degrade when assembled.</p> <p><b>Yangjie Electronics</b> does not guarantee device performance after assembly. All operating parameters must be validated for each customer application by customer's technical experts.</p> <p>Data sheet information is subjected to change without notice.</p> | <p>Recommended Storage Environment:</p> <p>Store in original container, in dessicated nitrogen, with no contamination.</p> <p>Shelf life for parts stored in above condition is 2 years.</p> <p>If the storage is done in normal atmosphere shelf life is reduced to 6 months.</p> |
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