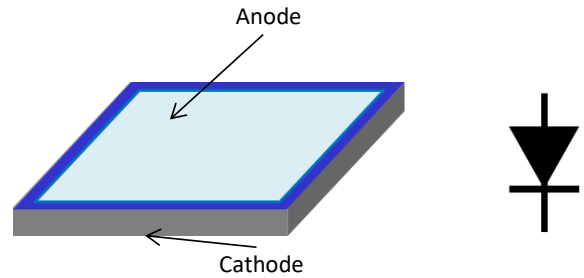


# YJ Planar Schottky Barrier Diode Die Specification

40V 0.5A, 25mil, Schottky barrier diode die based on silicon planar process  
Part No.: PSB025L040AS-180A

## Main Products Characteristics

- Average forward current:  $I_{F(AV)} = 0.5 \text{ A}$
- Maximum operating junction temperature:  $T_j = 125 \text{ }^\circ\text{C}$
- Top metal: AL



## Maximum Ratings

Parameter	Symbol	Rating
Repetitive peak reverse voltage	$V_{RRM}$	40 V
Average forward current	$I_{F(AV)}$	0.5 A
Non-repetitive peak surge current ( $t_p = 8.3 \text{ ms}$ , halfwave, 1 cycle)	$I_{FSM}$	10 A
Storage temperature range	$T_{stg}$	-50 to +125 $^\circ\text{C}$
Maximum operating junction temperature	$T_j$	125 $^\circ\text{C}$

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

Parameter	Symbol	Value	
		Spec	Typical
Reverse breakdown voltage $I_R = 1 \text{ mA}$	$V_{BR}$	45 V	52V
Maximum forward voltage drop $I_F = 0.5 \text{ A}$ Pulse Test: $t_p = 300 \mu\text{s}$ , $\delta \leq 2\%$	$V_F$	0.535V	0.45V
Maximum reverse current $V_R = V_{RRM}$ Pulse Test: $t_p = 300 \mu\text{s}$ , $\delta \leq 2\%$	$I_R$	20uA	3uA

## 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 *	7.1 Mils
Die Size **	24.8 Mils
Top Metal Pad	22 Mils
Active Area	18.8 Mils
Top Metal	AL
Back Metal	Ag

Note: 1 \* : Also can offer device with 10.5 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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