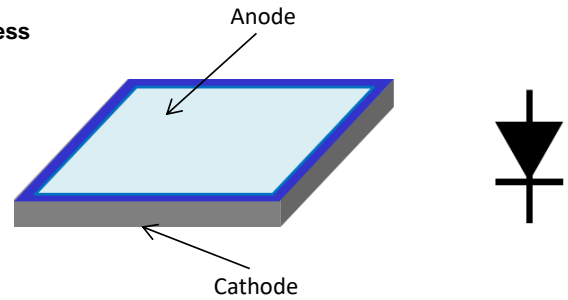


YJ Planar Schottky Barrier Diode Die Specification

45V 30A, 158mil, Schottky barrier diode die based on silicon planar process
Part No.: PSB158M045AS-290A

Main Products Characteristics

- Average forward current: $I_{F(AV)} = 30\text{ A}$
- Maximum operating junction temperature: $T_j = 150\text{ }^\circ\text{C}$
- ESD rating: >20KV, per IEC61000-4-2 (Contact Discharge)
- Top metal: Al



Maximum Ratings

Parameter	Symbol	Rating
Repetitive peak reverse voltage	V_{RRM}	45 V
Average forward current	$I_{F(AV)}$	30 A
Non-repetitive peak surge current ($t_p = 8.3\text{ ms}$, halfwave, 1 cycle)	I_{FSM}	350 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 $I_R = 1\text{ mA}$	V_{BR}	50 V	54V
Maximum forward voltage drop $I_F = 30\text{ A}$ Pulse Test: $t_p = 300\text{ }\mu\text{s}$, $\delta \leq 2\%$	V_F	0.55V	0.53V
Maximum reverse current $V_R = V_{RRM}$ Pulse Test: $t_p = 300\text{ }\mu\text{s}$, $\delta \leq 2\%$	I_R	150uA	100uA

Device Schematics and Outline Drawing

The top view shows a square die with a central 'Active Area' surrounded by three concentric rings labeled '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-sectional view shows the layers: 'Back Metal' at the bottom, 'Substrate', 'Guard Ring', 'Epi', 'SiO2', 'Schottky Barrier', and 'Top Metal' at the top.

Die Thickness *	11.4 Mils
Die Size **	158 Mils
Top Metal Pad	152 Mils
Active Area	148 Mils
Top Metal	Al
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>Yangjie Electronics 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>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------