

Schottky Rectifier Die Specification

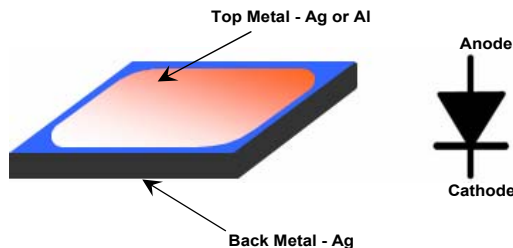
Photovoltaic Solarcell Bypass Schottky Rectifier

45V, 120mil Schottky Rectifier, Low Ir

Product Type: GDPMBR2045-120

Main Products Characteristics

- Average Forward Current: $I_{F(AV)} = 20\text{ A}$
- Maximum Operating Junction Temperature: $T_j = 150\text{ }^\circ\text{C}$
- Designed as Bypass Diodes for Solar Panels
- High Barrier Technology for Improved High Temperature Performance
- Wafer size: 6", PDPW: 1,640die/Wafer



Maximum Ratings

Parameter	Symbol	Rating
Repetitive peak reverse voltage	V_{RRM}	45 V
Average forward current	$I_{F(AV)}$	20 A
Non-repetitive peak surge current ($t_p = 8.3\text{ ms}$, halfwave, 1 cycle)	I_{FSM}	300 A
Storage temperature range	T_{stg}	-50 to +150 $^\circ\text{C}$
Maximum operating junction temperature	T_j	150 $^\circ\text{C}$ 200 $^\circ\text{C}$ at bypass mode

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	55 V
Maximum forward voltage drop Pulse Test: $t_p = 300\text{ }\mu\text{s}$, $\delta \leq 2\%$	V_F	0.48V @ 10A 0.53V @ 15A 0.55V @ 20A 0.70V @ 30A	0.45V @ 10A 0.49V @ 15A 0.52V @ 20A 0.57V @ 30A
Maximum reverse current $V_R = V_{RRM}$ Pulse Test: $t_p = 300\text{ }\mu\text{s}$, $\delta \leq 2\%$	I_R	0.2 mA	0.05 mA

Device Schematics and Outline Drawing

Die Thickness *	11 Mils
Die Size **	120 Mils
Top Metal Pad	116 Mils
Active Area	113 Mils
Top Metal	Ag or Al
Back Metal	Ag

Note: 1 *: Also can offer device with other thickness (8~15 mils)
 2 **: Cutting street width is around 0.7 mils

Important Notice

<p>Specification apply to die only. Actual performance may degrade when assembled.</p> <p>Suzhou Goodark 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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