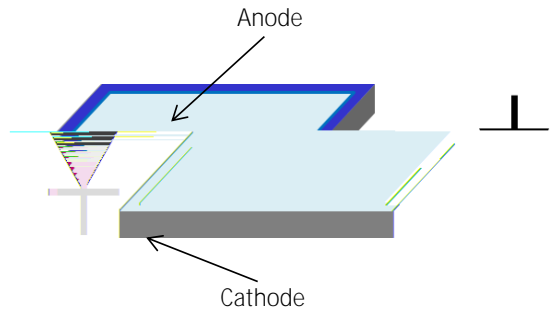


YJ Planar Fast Recovery Diode Die Specification

600V 75A, Fast recovery diode die based on silicon planar process
Part No.: FRD75A600AS-290A



Main Products Characteristics

Maximum Ratings

Parameter	Symbol	Rating
Repetitive peak reverse voltage	V_{RRM}	600V
Average forward current	$I_{F(AV)}$	75A
($t_p = 8.3$ ms, halfwave, 1 cycle)	I_{FSM}	700A
Storage temperature range	T_{stg}	-40 to +150 °C
Maximum operating junction temperature	T_j	150 °C

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

Parameter	Symbol	Value	
		Spec	Typical
Reverse breakdown voltage $I_R = 50\mu\text{A}$	V_{BR}	630V	650V
Maximum forward voltage drop I_F 2%	V_F	1.15V	1.05V
Reverse Recovery Time $I_F=0.5\text{A}, I_R=1\text{A}, I_{rr}=0.25\text{A}$	T_{rr}	75ns	68ns
Maximum reverse current $V_R = V_{RRM}$ 2%	I_R	2uA	0.05uA

Device Schematics and Outline Drawing

The diagram shows a top view and a cross-section of the diode die. The top view includes labels for 'Top Metal Pad', 'Active Area', 'Stop Ring', 'SiO2', and 'Top Metal'. The cross-section shows the 'Die Size', 'Back Metal', 'Epi', and 'Substrate' layers.

Die Thickness	290um
Die Size *	6600x6600um
Top Metal Pad	5912x5912um
Active Area	5772x5772um
Top Metal	Al
Back Metal	Ag

Note: 1 *: Cutting street width is around 40um

Important Notice

<p>Specification apply to die only. Actual performance may degrade when assembled.</p> <p>does not guarantee device performance after assembly.</p> <p>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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