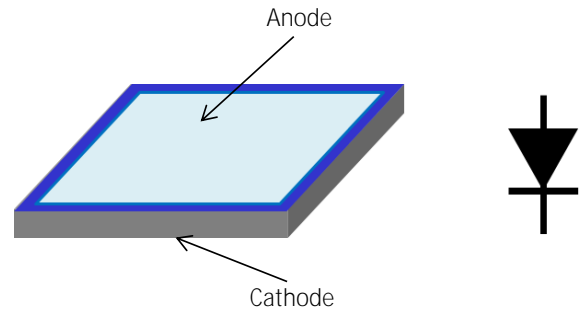


# YJ Planar Fast Recovery Diode Die Specification

600V 15A, Fast recovery diode die based on silicon planar process  
Part No.: FRD15A600AS-290A

## Main Products Characteristics

- Average forward current:  $I_{F(AV)} = 15A$
- Maximum operating junction temperature:  $T_j = 150\text{ }^\circ\text{C}$
- Planar Construction
- Top metal: Al



## Maximum Ratings

Parameter	Symbol	Rating
Repetitive peak reverse voltage	$V_{RRM}$	600V
Average forward current	$I_{F(AV)}$	15A
Non-repetitive peak surge current ( $t_p = 8.3\text{ ms}$ , halfwave, 1 cycle)	$I_{FSM}$	150A
Storage temperature range	$T_{stg}$	-40 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 $I_R = 50\mu\text{A}$	$V_{BR}$	630V	650V
Maximum forward voltage drop $I_F = 15A$ , Pulse Test: $t_p = 380\text{ }\mu\text{s}$ , $\delta \leq 2\%$	$V_F$	1.6V	1.45V
Reverse Recovery Time $I_F = 0.5A$ , $I_R = 1A$ , $I_{rr} = 0.25A$	$T_{rr}$	35ns	28ns
Maximum reverse current $V_R = V_{RRM}$ Pulse Test: $t_p = 10\text{ ms}$ , $\delta \leq 2\%$	$I_R$	2 $\mu\text{A}$	0.05 $\mu\text{A}$

## Device Schematics and Outline Drawing

Die Thickness	290um
Die Size *	3000x3000um
Top Metal Pad	2272x2272um
Active Area	2202x2202um
Top Metal	Al
Back Metal	Ag

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

## Important Notice

Specification apply to die only. Actual performance may degrade when assembled.

**Yangjie Electronics** does not guarantee device performance after assembly.  
All operating parameters must be validated for each customer application by customer's technical experts.

Data sheet information is subjected to change without notice.

Recommended Storage Environment:

Store in original container, in dessicated nitrogen, with no contamination.

Shelf life for parts stored in above condition is 2 years.

If the storage is done in normal atmosphere shelf life is reduced to 6 months.