

YJ Planar Fast Recovery Diode Die Specification

600V 60A, Fast recovery diode die based on silicon planar process

Part No.: FRD60A600AS-290A

Main Products Characteristics

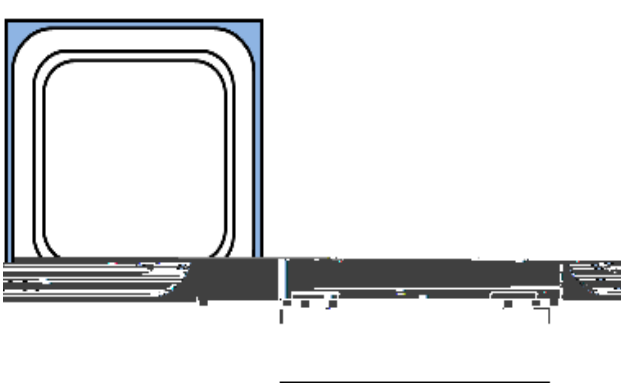
Maximum Ratings

| Parameter | Symbol | Rating |
|--|-------------|----------------|
| Repetitive peak reverse voltage | V_{RRM} | 600V |
| Average forward current | $I_{F(AV)}$ | 60A |
| ($t_p = 8.3$ ms, halfwave, 1 cycle) | I_{FSM} | 500A |
| 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 | 680V |
| 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 | 65ns |
| Maximum reverse current $V_R = V_{RRM}$ 2% | I_R | 2uA | 0.05uA |

Device Schematics and Outline Drawing



| | |
|---------------|-------------|
| Die Thickness | 290um |
| Die Size * | 5800x5800um |
| Top Metal Pad | 5072x5072um |
| Active Area | 4982x4982um |
| Top Metal | Al |
| Back Metal | Ag |

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

Important Notice

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|---|--|
| <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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