

FAST RECOVERY EPITAXIAL DIODE

600V / 60A
 $V_F=2.2V@I_F=30A$, $t_{rr}=52ns$

PRODUCT FEATURES

- Ultrafast Recovery Time
- Soft Recovery Characteristics
- Low Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Leakage Current

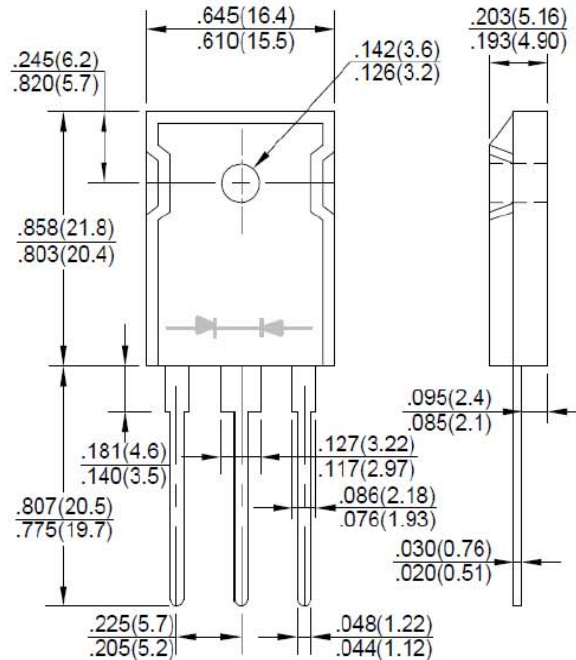
APPLICATIONS

- Converter, PFC
- Freewheeling, Snubber
- UPS, Plating Power Supply
- Inversion Welder

MECHANICAL DATA

- Case : TO-247AB Molded Plastic
- Epoxy : UL94V-0 rate flame retardant
- Polarity : As Marked

TO-247AB



ABSOLUTE MAXIMUM RATINGS (TC=25°C unless otherwise specified)

| PARAMETER | SYMBOL | VALUES | UNIT |
|---------------------------------------------|------------------|--------------------------------|------|
| | Marking | D60A06P | |
| Maximum Repetitive Reverse Voltage | V_{RM} | 600 | V |
| Average Forward Current | $I_{F(AV)}$ | $T_C=95^\circ C$, Per Diode | 30 |
| | | $T_C=95^\circ C$, Per Package | 60 |
| Non-Repetitive Surge Forward Current | I_{FSM} | 300 | A |
| Power Dissipation | P_D | 147 | W |
| Operating Junction and Storage Temperatures | T_J, T_{STG} | -55 to + 150 | °C |
| Thermal Resistance | Junction-to-Case | $R_{\theta JC}$ | 0.85 |
| Module-to-Sink | | | 1.1 |
| Weight | | | 5.8 |

ELECTRICAL AND DYNAMIC RECOVERY CHARACTERISTICS ($T_J=25^\circ C$, unless otherwise specified)

| PARAMETER | TEST CONDITIONS | SYMBOL | Min. | Typ. | Max. | UNIT |
|-------------------------------|----------------------------------------|-----------|------|------|------|---------|
| Reverse Leakage Current | $V_R=600V$ | I_{RM} | - | - | 25 | μA |
| | $V_R=600V, T_J=125^\circ C$ | | - | - | 250 | μA |
| Forward Voltage | $I_F=30A$ | V_F | - | 1.6 | 2.2 | V |
| | $I_F=30V, T_J=125^\circ C$ | | - | - | 2.0 | V |
| Reverse Recovery Time | $I_F=1A, V_R=30V, di_F/dt=-200A/\mu s$ | t_{rr} | - | 35 | - | ns |
| Reverse Recovery Time | $V_R=300V, I_F=30A$ | t_{rr} | - | 52 | - | ns |
| Max. Reverse Recovery Current | $di_F/dt=-200A/\mu s, T_J=25^\circ C$ | I_{RRM} | - | 3.8 | - | A |
| Reverse Recovery Time | $V_R=300V, I_F=30A$ | t_{rr} | - | 135 | - | ns |
| Max. Reverse Recovery Current | $di_F/dt=-200A/\mu s, T_J=125^\circ C$ | I_{RRM} | - | 8.8 | - | A |

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FIG. 1 - Typical Forward Voltage Drop Characteristics

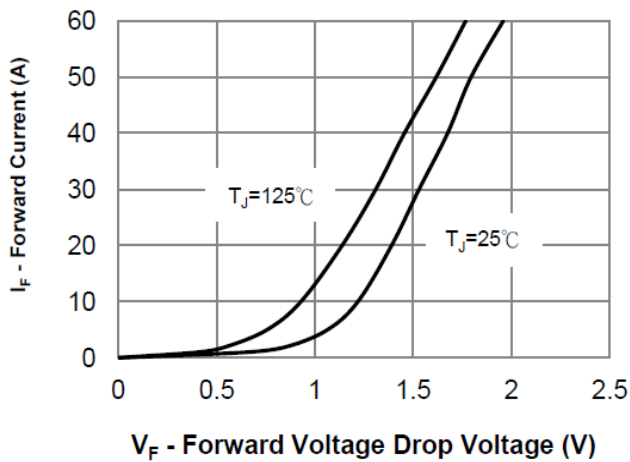


FIG. 2 - Typical Value of Reverse Current vs. Reverse Voltage

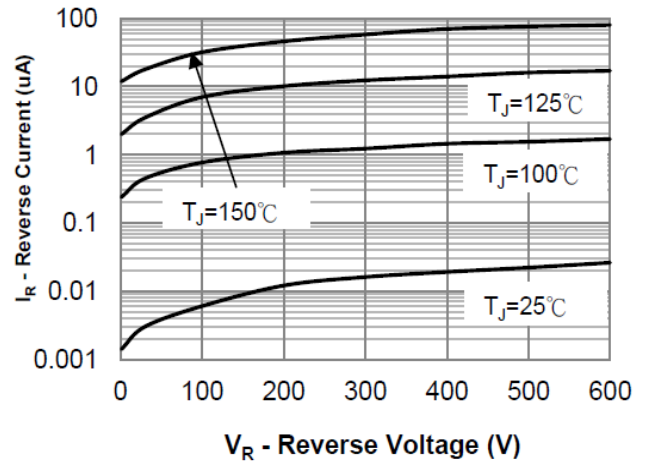


FIG. 3 - Typical Junction Capacitance vs. Reverse Voltage

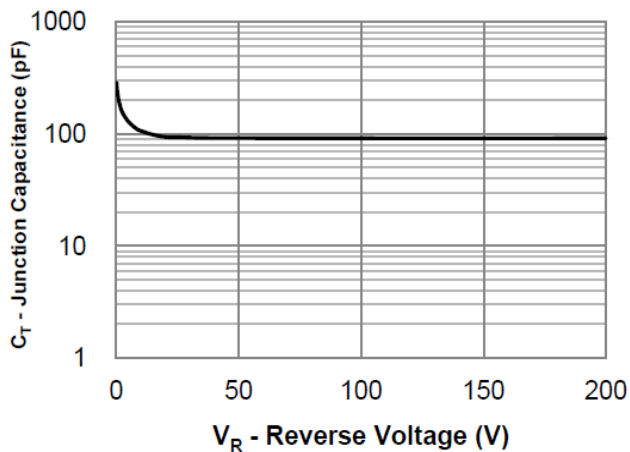
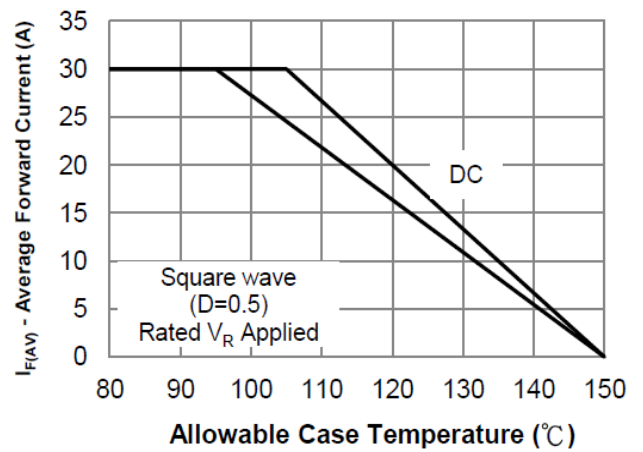


FIG. 4 - Average Forward Current vs. Maximum Allowable Case Temperature



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!