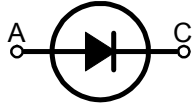
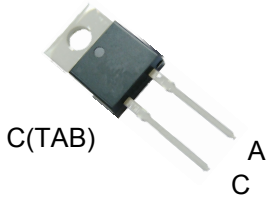


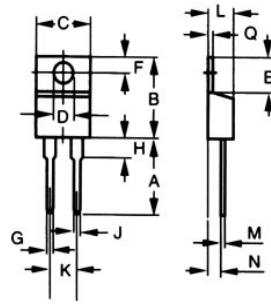
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MUR560

Ultra Fast Recovery Diodes



Dimensions TO-220AC



| Dim. | Inches | | Millimeter | |
|------|--------|-------|------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.500 | 0.580 | 12.70 | 14.73 |
| B | 0.560 | 0.650 | 14.23 | 16.51 |
| C | 0.380 | 0.420 | 9.66 | 10.66 |
| D | 0.139 | 0.161 | 3.54 | 4.08 |
| E | 2.300 | 0.420 | 5.85 | 6.85 |
| F | 0.100 | 0.135 | 2.54 | 3.42 |
| G | 0.045 | 0.070 | 1.15 | 1.77 |
| H | - | 0.250 | - | 6.35 |
| J | 0.025 | 0.035 | 0.64 | 0.89 |
| K | 0.190 | 0.210 | 4.83 | 5.33 |
| L | 0.140 | 0.190 | 3.56 | 4.82 |
| M | 0.015 | 0.022 | 0.38 | 0.56 |
| N | 0.080 | 0.115 | 2.04 | 2.49 |
| Q | 0.025 | 0.055 | 0.64 | 1.39 |

A=Anode, C=Cathode, TAB=Cathode

| | V_{RSM} | V_{RRM} |
|---------------|-----------|-----------|
| | V | V |
| MUR560 | 600 | 600 |

| Symbol | Test Conditions | Maximum Ratings | Unit |
|--|---|---|----------------------|
| IFRMS | $T_{VJ}=T_{VJM}$ | 14 | A |
| IFAVM | $T_C=115^{\circ}\text{C}$; rectangular, $d=0.5$ | 5 | |
| IFRM | $t_p < 10\mu\text{s}$; rep. rating, pulse width limited by T_{VJM} | 110 | |
| IFSM | $T_{VJ}=45^{\circ}\text{C}$ | $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine | A |
| | $T_{VJ}=150^{\circ}\text{C}$ | $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine | |
| I^2t | $T_{VJ}=45^{\circ}\text{C}$ | $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine | A^2s |
| | $T_{VJ}=150^{\circ}\text{C}$ | $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine | |
| T_{VJ} T_{VJM} T_{stg} | | -40...+150 150 -40...+150 | $^{\circ}\text{C}$ |
| P_{tot} | $T_C=25^{\circ}\text{C}$ | 50 | W |
| M_d | Mounting torque | 0.4...0.6 | Nm |
| Weight | | 2 | g |

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| Symbol | Test Conditions | Characteristic Values | Unit |
|-------------------------|---|-----------------------|------------------|
| I_R | $T_{VJ}=25^{\circ}\text{C}; V_R=V_{RRM}$ | 10 | μA |
| | $T_{VJ}=25^{\circ}\text{C}; V_R=0.8 \cdot V_{RRM}$ | 5 | μA |
| | $T_{VJ}=125^{\circ}\text{C}; V_R=0.8 \cdot V_{RRM}$ | 1.0 | mA |
| V_F | $I_F=5\text{A}; T_{VJ}=150^{\circ}\text{C}$ | 1.3 | V |
| | $T_{VJ}=25^{\circ}\text{C}$ | 1.6 | |
| V_{TO} | For power-loss calculations only | 0.98 | V |
| r_T | $T_{VJ}=T_{VJM}$ | 28.7 | $\text{m}\Omega$ |
| R_{thJC} | | 2.5 | K/W |
| R_{thCK} | | 0.5 | |
| R_{thJA} | | 3.0 | |
| t_{rr} | $I_F=1\text{A}; -di/dt=50\text{A}/\mu\text{s}; V_R=30\text{V}; T_{VJ}=25^{\circ}\text{C}$ | 50 | ns |
| I_{RM} | $V_R=350\text{V}; I_F=8\text{A}; -di_F/dt=64\text{A}/\mu\text{s}; L \leq 0.05\mu\text{H}; T_{VJ}=100^{\circ}\text{C}$ | 2.5 | A |

FEATURES

- * International standard package JEDEC TO-220AC
- * Very short recovery time
- * Extremely low switching losses
- * Low I_{RM} -values

APPLICATIONS

- * Antiparallel diode for high frequency switching devices
- * Antisaturation diode
- * Snubber diode
- * Free wheeling diode in converters and motor control circuits
- * Rectifiers in switch mode power supplies (SMPS)
- * Inductive heating and melting
- * Uninterruptible power supplies (UPS)
- * Ultrasonic cleaners and welders

ADVANTAGES

- * High reliability circuit operation
- * Low voltage peaks for reduced protection circuits
- * Low noise switching
- * Low losses
- * Operating at lower temperature or space saving by reduced cooling

MUR560

Ultra Fast Recovery Diodes

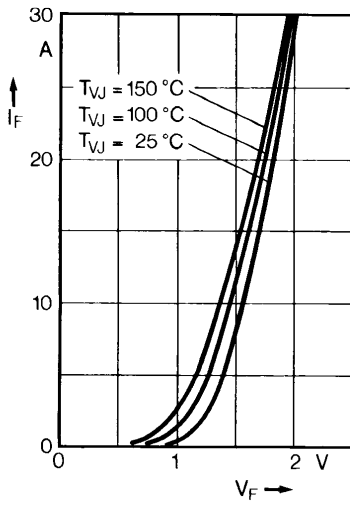


Fig. 1 Forward current versus voltage drop.

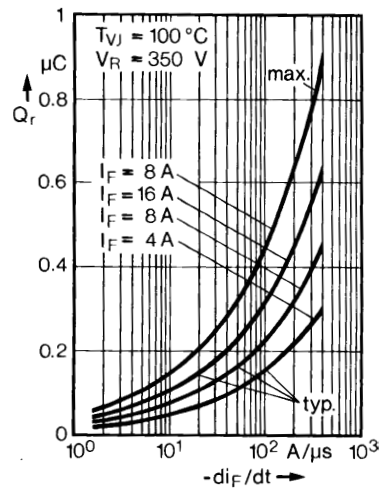


Fig. 2 Recovery charge versus $-di_F/dt$.

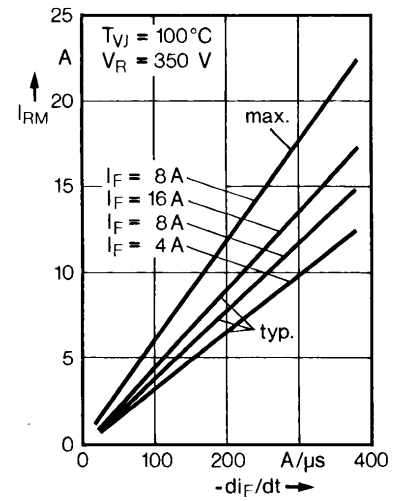


Fig. 3 Peak reverse current versus $-di_F/dt$.

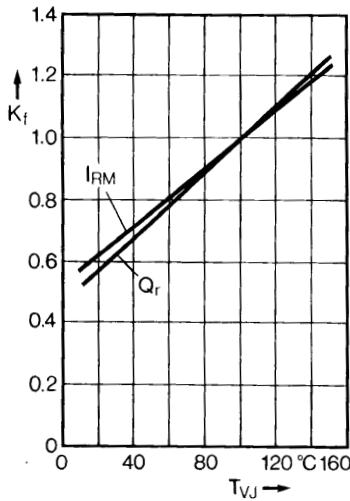


Fig. 4 Dynamic parameters versus junction temperature.

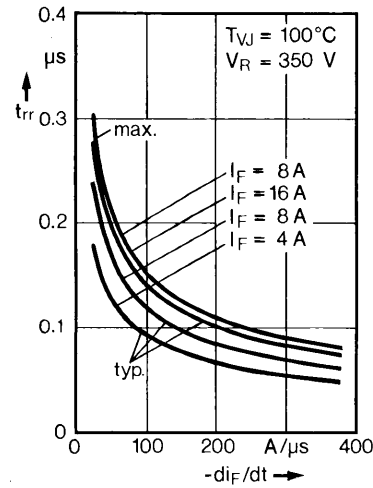


Fig. 5 Recovery time versus $-di_F/dt$.

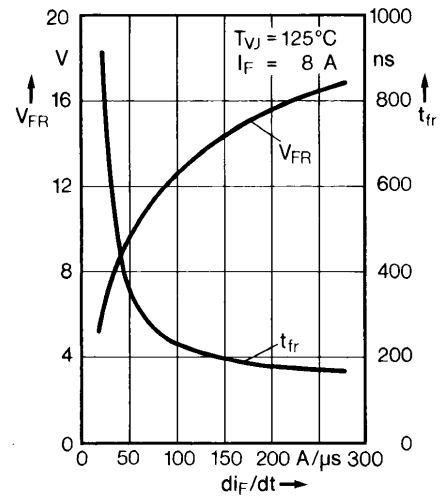


Fig. 6 Peak forward voltage versus di_F/dt .

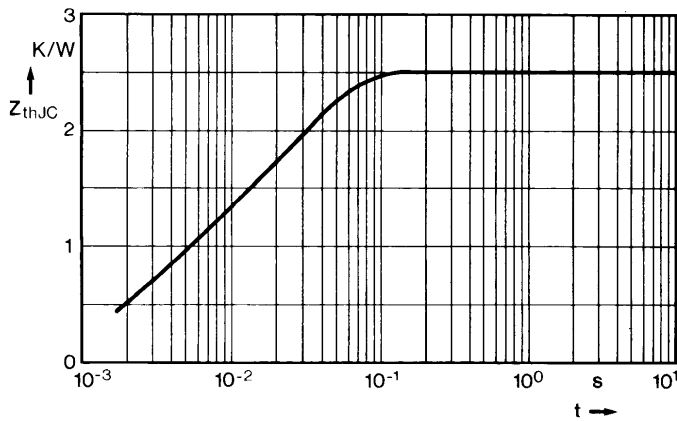


Fig. 7 Transient thermal impedance junction to case.