

DIGITRON SEMICONDUCTORS

MUR605CT-MUR620CT

6A SCHOTTKY RECTIFIER

MAXIMUM RATINGS

| Rating | Symbol | MUR | | | | Unit |
|---|-----------------|---------------------------------|-------|-------|-------|--------------------|
| | | 605CT | 610CT | 615CT | 620CT | |
| Peak repetitive reverse voltage | V_{RRM} | | | | | V |
| Working peak reverse voltage | V_{RWM} | 50 | 100 | 150 | 200 | |
| DC blocking voltage | V_R | | | | | |
| Average rectified forward current (Rated V_R) | $I_{F(AV)}$ | 6.0 @ $T_C = 130^\circ\text{C}$ | | | | A |
| Non-repetitive peak surge current (surge applied at rated load conditions, halfwave, single phase, 60Hz) | I_{FSM} | 75 | | | | A |
| Operating and storage junction temperature range | T_J, T_{stg} | -65 to +175 | | | | $^\circ\text{C}$ |
| Maximum thermal resistance Junction to case | $R_{\theta JC}$ | 7.0 | | | | $^\circ\text{C/W}$ |

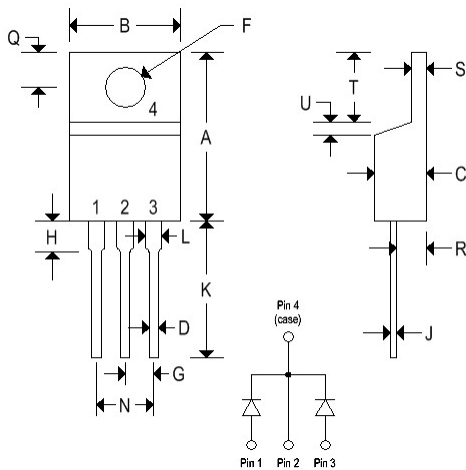
ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | MUR | | | | Unit |
|---|----------|-------|-------|-------|-------|---------------|
| | | 605CT | 610CT | 615CT | 620CT | |
| Maximum instantaneous forward voltage ⁽¹⁾ ($I_F = 3.0\text{A}, T_C = 150^\circ\text{C}$) ($I_F = 3.0\text{A}, T_C = 25^\circ\text{C}$) | V_F | | 0.895 | | | V |
| Maximum instantaneous reverse current ⁽¹⁾ (Rated dc voltage, $T_C = 150^\circ\text{C}$) (Rated dc voltage, $T_C = 25^\circ\text{C}$) | I_R | | 250 | | | μA |
| Maximum reverse recovery time ($I_F = 1.0\text{A}, di/dt = 50\text{A}/\mu\text{s}$) | t_{rr} | | 35 | | | ns |

Note 1: Pulse test: Pulse width = 300 μs , duty cycle = 2.0%.

MECHANICAL CHARACTERISTICS

| | |
|---------|---------------|
| Case | TO-220AB |
| Marking | Alpha-numeric |
| Pin out | See below |



| | TO-220AB | | | |
|---|----------|-------|-------------|--------|
| | Inches | | Millimeters | |
| | Min | Max | Min | Max |
| A | 0.570 | 0.620 | 14.480 | 15.750 |
| B | 0.380 | 0.405 | 9.660 | 10.280 |
| C | 0.160 | 0.190 | 4.070 | 4.820 |
| D | 0.025 | 0.035 | 0.640 | 0.880 |
| F | 0.142 | 0.147 | 3.610 | 3.730 |
| G | 0.095 | 0.105 | 2.420 | 2.660 |
| H | 0.110 | 0.155 | 2.800 | 3.930 |
| J | 0.018 | 0.025 | 0.460 | 0.640 |
| K | 0.500 | 0.562 | 12.700 | 14.270 |
| L | 0.045 | 0.060 | 1.150 | 1.520 |
| N | 0.190 | 0.210 | 4.830 | 5.330 |
| Q | 0.100 | 0.120 | 2.540 | 3.040 |
| R | 0.080 | 0.110 | 2.040 | 2.790 |
| S | 0.045 | 0.055 | 1.150 | 1.390 |
| T | 0.235 | 0.255 | 5.970 | 6.470 |
| U | - | 0.050 | - | 1.270 |

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Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).
 Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.

FIGURE 1 — TYPICAL FORWARD VOLTAGE

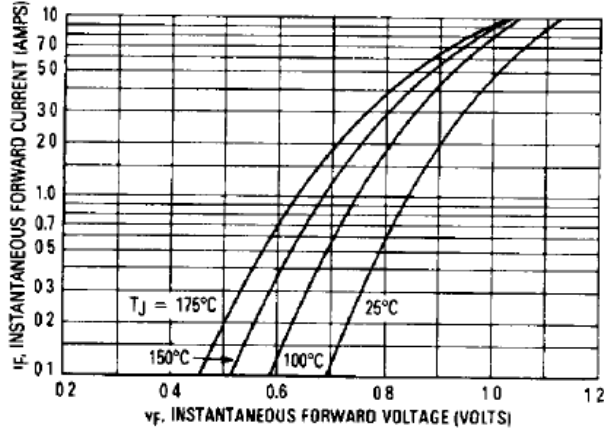


FIGURE 2 — TYPICAL REVERSE CURRENT

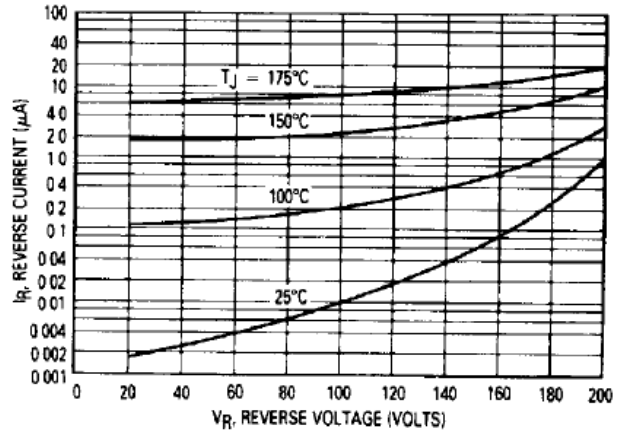


FIGURE 3 — TOTAL DEVICE CURRENT DERATING, CASE

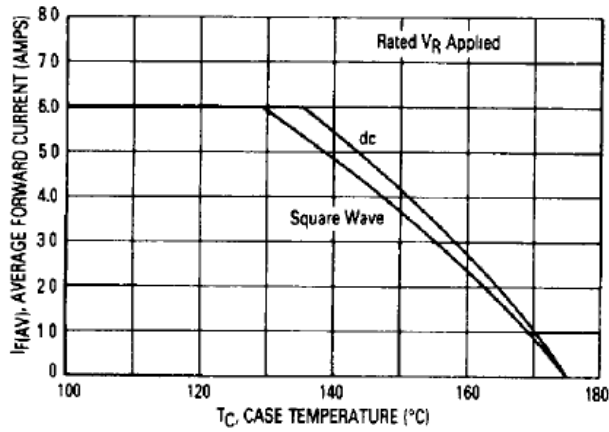


FIGURE 4 — TOTAL DEVICE CURRENT DERATING, AMBIENT

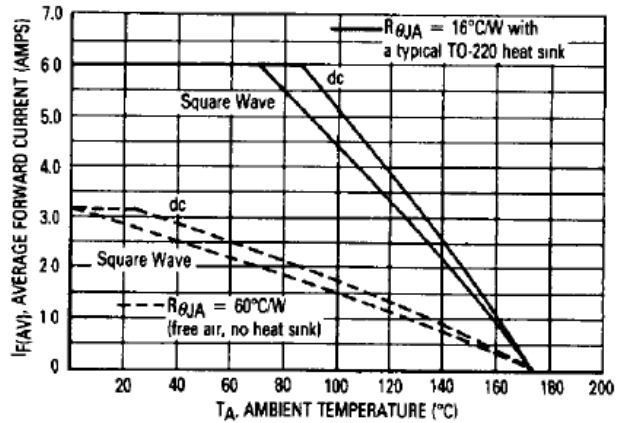


FIGURE 5 — POWER DISSIPATION

