

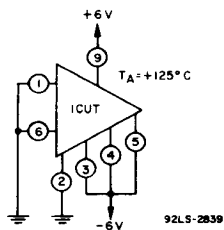
CA3000/...

High-Reliability DC Amplifier

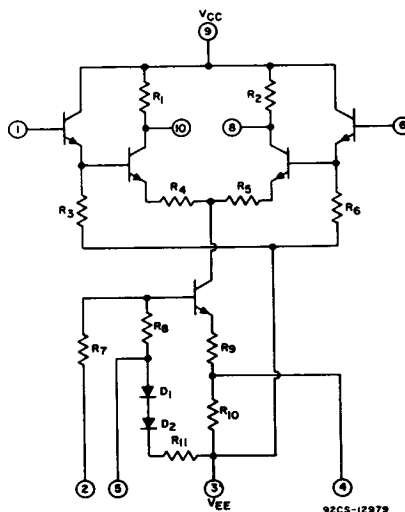
The CA3000 Slash (/) Series type is supplied in the 10-lead TO-5 style package.

TABLE A. POST BURN-IN, FINAL ELECTRICAL AND GROUP A SAMPLING TESTS

| Characteristics | Symbol | Test Conditions $V^+ = +6 V,$ $V^- = -6 V$ | Limits for Indicated Temp. (°C) | | | | | | Units | |
|--|-------------------|--|---------------------------------|-----|------|---------|-----|------|---------|-----------|
| | | | Minimum | | | Maximum | | | | |
| | | | -55 | +25 | +125 | -55 | +25 | +125 | | |
| STATIC | | | | | | | | | | |
| Input Offset Voltage | V_{IO} | — | — | — | — | 6.5 | 5 | 6.5 | mV | |
| Input Offset Current | I_{IO} | — | — | — | — | 20 | 10 | 20 | μA | |
| Input Bias Current | I_I | — | — | — | — | 70 | 36 | 25 | μA | |
| Quiescent Operating Voltage | V_B or V_{IO} | Terminal 4 | Terminal 5 | — | 1.5 | — | — | 3.2 | — | V |
| | | NC | NC | | | | | | | |
| Device Dissipation | P_T | Terminal 4 | Terminal 5 | 30 | 25 | 20 | 60 | 60 | 50 | mW |
| | | NC | NC | | | | | | | |
| | | NC | -VEE | 25 | 20 | 15 | 55 | 55 | 50 | mW |
| | | -VEE | NC | 55 | 50 | 45 | 105 | 105 | 90 | mW |
| | | -VEE | -VEE | 35 | 35 | 25 | 70 | 70 | 65 | mW |
| DYNAMIC | | | | | | | | | | |
| Differential Voltage Gain | A_{Diff} | | Single-Ended Output | — | 28 | — | — | — | — | dB |
| Maximum Output Voltage | $V_{OUT(p-p)}$ | | | — | 5 | — | — | — | — | V_{p-p} |
| Bandwidth at -3 dB Point | BW | | | — | 600 | — | — | — | — | kHz |
| Common-Mode Rejection Ratio | CMR | | | — | 70 | — | — | — | — | dB |
| AGC Range (Maximum Voltage Gain to Complete Cut-off) | AGC | | | — | 80 | — | — | — | — | dB |



Burn-in and operating life test circuit



Schematic Diagram

TABLE B. DELTA LIMITS at $T_A = 25^\circ\text{C}$, $V^+ = +6\text{V}$, $V^- = -6\text{V}$ (/1 only)

| CHARACTERISTIC | SYMBOL | TEST CONDITIONS | LIMITS | UNITS |
|-----------------------------|-------------------|----------------------------------|---------------|---------------|
| | | | MAX. Δ | |
| Input Bias Current | I_I | — | ± 4 | μA |
| Quiescent Operating Voltage | V_8 or V_{10} | Terminal 4: NC Terminal 5: NC | ± 0.3 | V |
| Device Dissipation | P_T | Terminal 4: NC Terminal 5: NC | ± 6 | mW |
| Input Offset Current | I_{IO} | — | ± 2 | μA |
| Input Offset Voltage | V_{IO} | — | ± 1 | mV |

TABLE C. GROUPS C AND D END-POINT TESTS at $T_A = 25^\circ\text{C}$

| Characteristic | Symbol | TEST CONDITIONS $V^+ = +6\text{V}$, $V^- = -6\text{V}$ | Limits | | Units |
|---|-------------------|--|--------|------|---------------|
| | | | Min. | Max. | |
| Input Offset Voltage | V_{IO} | | — | 5 | mV |
| Input Offset Current | I_{IO} | | — | 10 | μA |
| Input Bias Current | I_I | | — | 36 | μA |
| Quiescent Operating Voltage | V_8 or V_{10} | | 1.5 | 3.2 | V |
| Device Dissipation | P_T | Terminal 4 NC Terminal 5 NC | 25 | 60 | mW |
| Differential Voltage Gain Single-Ended Input | A_{DIFF} | Single Ended Output $f = 1\text{ kHz}$ | 28 | — | dB |