

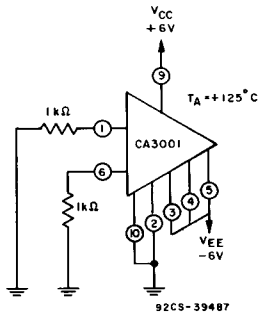
CA3001/...

High-Reliability Video Amplifier

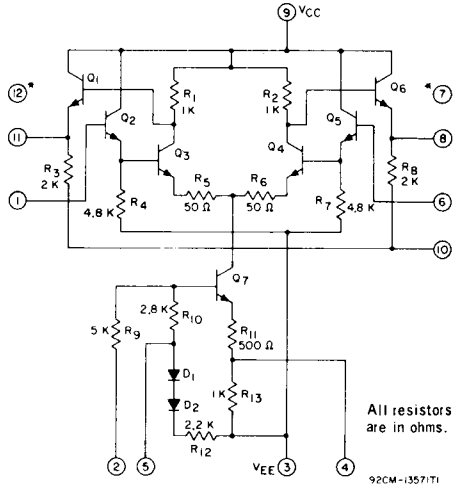
The CA3001 Slash (/) Series type is supplied in the 12-lead TO-5 style package.

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

| Characteristics | Symbol | Test Conditions $V^+ = +6V$, $V^- = -6V$ | Limits for Indicated Temp. ($^{\circ}C$) | | | | | | Units | |
|---|-------------------|---|--|-----|------|---------|-----|------|-----------|----|
| | | | Minimum | | | Maximum | | | | |
| | | | -55 | +25 | +125 | -55 | +25 | +125 | | |
| Static | | | | | | | | | | |
| Input Unbalance Current | I_{IU} | - | - | - | - | 23 | 10 | 5 | μA | |
| Input Bias Current | I_I | - | - | - | - | 66 | 36 | 22 | μA | |
| Output Offset Voltage | V_{oo} | - | - | - | - | 420 | 300 | 260 | mV | |
| Quiescent Operating Voltage | V_9 or V_{11} | Terminal 4 | Terminal 5 | | | | | | | |
| | | NC | NC | 3.8 | 3.8 | 3.8 | 4.8 | 4.8 | 4.8 | V |
| Device Dissipation | P_T | Terminal 4 | Terminal 5 | | | | | | | |
| | | NC | NC | 60 | 60 | 50 | 125 | 115 | 110 | mW |
| | | NC | -V- | 55 | 55 | 45 | 120 | 105 | 105 | mW |
| | | -V- | NC | 80 | 80 | 70 | 175 | 160 | 155 | mW |
| | | -V- | -V- | 60 | 60 | 50 | 135 | 125 | 125 | mW |
| Common-Mode Rejection Ratio | CMRR | $f = 1 \text{ kHz}$ | - | 70 | - | - | - | - | dB | |
| Dynamic | | | | | | | | | | |
| Differential Voltage Gain (single-ended input and output) | A_{Diff} | $f = 1.75 \text{ MHz}$ | - | 16 | - | - | - | - | dB | |
| | | $f = 20 \text{ MHz}$ | - | 10 | - | - | - | - | dB | |
| Maximum Output Voltage Swing | $V_{OUT (p-p)}$ | $f = 1.75 \text{ MHz}$ | - | 4 | - | - | - | - | V_{p-p} | |
| Noise Figure | NF | $f = 1.75 \text{ MHz}, R_s = 1k\Omega$ | - | - | - | - | 8 | - | dB | |
| AGC Range (max. voltage gain to complete cutoff) | AGC | $f = 1.75 \text{ MHz}$ | - | 55 | - | - | - | - | dB | |



Burn-in and operating life test circuit.



* Internal Connection - DO NOT USE

Schematic Diagram.

TABLE B. DELTA LIMITS at $T_A = 25^\circ C$, $V^+ = +6V$, $V^- = -6V$ (I1 only)

| Characteristic | Symbol | Test Conditions | Limits | Units |
|-----------------------------|-------------------|----------------------------------|---------------|---------|
| | | | Max. Δ | |
| Input Offset Current | I_{IO} | - | ± 2 | μA |
| Input-Bias Current | I_I | - | ± 4 | μA |
| Output Offset Voltage | V_{OO} | - | ± 100 | mV |
| Quiescent Operating Voltage | V_8 or V_{11} | Terminal 4: NC Terminal 5: NC | ± 0.5 | V |
| Device Dissipation | P_T | Terminal 4: NC Terminal 5: NC | ± 12 | mW |

TABLE C. GROUPS C AND D END-POINT TESTS at $T_A = 25^\circ C$, $V_C = +6V$, $V_{EE} = -6V$

| Characteristic | Symbol | Test Conditions | Limits | | Units |
|-----------------------------|-------------------|--|--------|------|---------|
| | | | Min. | Max. | |
| Input Bias Current | I_I | - | - | 36 | μA |
| Output Offset Voltage | V_{OO} | - | - | 300 | mV |
| Quiescent Operating Voltage | V_8 or V_{11} | Terminal $\frac{4}{NC}$ $\frac{5}{NC}$ | 3.8 | 4.8 | V |
| Device Dissipation | P_T | Terminal $\frac{4}{NC}$ $\frac{5}{NC}$ | 60 | 115 | mW |
| Voltage Gain | A_{Diff} | $f = 1.75 \text{ MHz}$ | 16 | - | dB |