

**AMPLIFIERS (continued)**  
**Single Operational Amplifiers (continued)**  
**Internally Compensated**

| Device | I <sub>B</sub><br>μA<br>Max | V <sub>IO</sub><br>mV<br>Max | TC <sub>VIO</sub><br>μV/°C<br>Typ | I <sub>O</sub><br>nA<br>Max | A <sub>vol</sub><br>V/mV<br>Min | BW<br>(A <sub>v</sub> =1)<br>MHz<br>Typ | SR<br>(A <sub>v</sub> =1)<br>V/μs<br>Typ | Supply<br>Voltage<br>V<br>Min Max |  | Description | Packages |
|--------|-----------------------------|------------------------------|-----------------------------------|-----------------------------|---------------------------------|-----------------------------------------|------------------------------------------|-----------------------------------|--|-------------|----------|
|--------|-----------------------------|------------------------------|-----------------------------------|-----------------------------|---------------------------------|-----------------------------------------|------------------------------------------|-----------------------------------|--|-------------|----------|

**Commercial Temperature Range (0°C to +70°C)**

|          |        |       |     |        |      |     |     |      |      |                                 |                 |
|----------|--------|-------|-----|--------|------|-----|-----|------|------|---------------------------------|-----------------|
| LF351    | 200 pA | 10    | 10  | 100 pA | 25   | 4.0 | 13  | ±5.0 | ±18  | JFET Input                      | 626             |
| LF355    | 200 pA | 10    | 5.0 | 50 pA  | 50   | 1.0 | 5.0 | ±5.0 | ±18  | JFET Input                      | 601,626,693     |
| LF355B   | 100 pA | 5.0   | 5.0 | 20 pA  | 50   | 2.5 | 5.0 | ±5.0 | ±22  | JFET Input                      | 601,626,693     |
| LF356    | 200 pA | 10    | 5.0 | 50 pA  | 50   | 2.0 | 15  | ±5.0 | ±18  | JFET Input                      | 601,626,693     |
| LF356B   | 100 pA | 5.0   | 5.0 | 20 pA  | 50   | 5.0 | 12  | ±5.0 | ±22  | JFET Input                      | 601,626,693     |
| LF357    | 200 pA | 10    | 5.0 | 50 pA  | 50   | 3.0 | 75  | ±5.0 | ±18  | Wideband FET Input              | 601,626,693     |
| LF357B   | 100 pA | 5.0   | 5.0 | 20 pA  | 50   | 20  | 50  | ±5.0 | ±22  | JFET Input                      | 601,626,693     |
| LF411    | 200 pA | 5.0   | 10  | 100 pA | 25   | 4.0 | 15  | ±3.0 | ±18  | High speed                      | 626,751         |
| LF411A   | 200 pA | 2.0   | 10  | 100 pA | 50   | 4.0 | 15  | ±3.0 | ±22  | JFET Input                      | 626,751         |
| LF441    | 100 pA | 5.0   | 20  | 50 pA  | 25   | 1.0 | 1.0 | ±3.0 | ±18  | Single Bifet Low power          | 626,693,751     |
| LF441A   | 50 pA  | 0.5   | 10  | 25 pA  | 50   | 1.0 | 1.0 | ±3.0 | ±22  | Single Bifet Low power          | 626,693,751     |
| LM11CL   | 200 pA | 5.0   | 3.0 | 25 pA  | 50   | 1.0 | 0.3 | ±3.0 | ±20  | Precision                       | 626             |
| MC1436   | 0.04   | 10    | 12  | 10     | 70   | 1.0 | 2.0 | ±15  | ±34  | High Voltage                    | 693,751         |
| MC1456   | 0.03   | 10    | 12  | 10     | 70   | 1.0 | 2.5 | ±3.0 | ±18  | High Performance                | 626             |
| MC1733C  | 30     | —     | —   | 5.0 μA | 80   | 90  | —   | ±4.0 | ±8.0 | Differential Wideband Video Amp | 601,632,646     |
| MC1741C  | 0.5    | 6.0   | 15  | 200    | 20   | 1.0 | 0.5 | ±3.0 | ±18  | General Purpose                 | 601,626,293,751 |
| MC1741NC | 0.5    | 6.0   | 15  | 200    | 20   | 1.0 | 0.5 | ±3.0 | ±18  | Low Noise                       | 626             |
| MC1741SC | 0.5    | 6.0   | 15  | 200    | 20   | 1.0 | 10  | ±3.0 | ±18  | High Slew Rate                  | 626             |
| MC1776C  | 0.003  | 6.0   | 15  | 3.0    | 100  | 1.0 | 0.2 | ±1.5 | ±18  | μPower, Programmable            | 693,626,601,751 |
| MC34001  | 200 pA | 10    | 10  | 100 pA | 25   | 4.0 | 13  | ±5.0 | ±18  | JFET Input                      | 601,626,693,751 |
| MC34001A | 100 pA | 2.0   | 10  | 50 pA  | 50   | 4.0 | 13  | ±5.0 | ±18  | JFET Input                      | 601,626,693,751 |
| MC34001B | 200 pA | 5.0   | 10  | 100 pA | 50   | 4.0 | 13  | ±5.0 | ±18  | JFET Input                      | 601,626,693,751 |
| MC34071  | 0.5    | 3.5   | 10  | 75     | 25   | 4.5 | 13  | +3.0 | +44  | High Performance                | 626,693,751     |
| MC34071A | 0.5    | 1.5   | 10  | 50     | 50   | 4.5 | 13  | +3.0 | +44  | Single Supply                   | 626,693         |
| MC33171  | 100 nA | 4.5   | 10  | 20 nA  | 50   | 1.8 | 2.1 | +3.0 | +44  | Micropower Single Supply        | 626,751         |
| MC34081  | 200 pA | 3.0   | 10  | 100 pA | 25   | 10  | 40  | ±3.0 | ±22  | High speed                      | 601,626,693     |
| MC34081A | 200 pA | 2.5   | 10  | 100 pA | 50   | 10  | 40  | ±3.0 | ±22  | JFET Input                      | 601,626,693     |
| MC34080  | 200 pA | 3.0   | 10  | 100 pA | 25   | 16  | 50  | ±3.0 | ±22  | Decompensated                   | 601,626,693     |
| MC34080A | 200 pA | 2.5   | 10  | 100 pA | 50   | 16  | 50  | ±3.0 | ±22  | MC34081<br>A <sub>vcl</sub> ≥ 2 | 601,626,693     |
| MC34181  | 200 pA | 1.0   | 10  | 100 pA | 25   | 4.0 | 15  | —    | ±22  | Single Micropower High speed    | 626,693         |
| OP-27EP  | 0.040  | 0.025 | 0.2 | 35     | 1000 | 8.0 | 2.8 | ±4.0 | ±22  | Low Noise, Precision            | 626             |
| OP-27FP  | 0.055  | 0.060 | 0.3 | 50     | 1000 | 8.0 | 2.8 | ±4.0 | ±22  | Low Noise, Precision            | 626             |
| OP-27GP  | 0.080  | 0.100 | 0.4 | 75     | 700  | 8.0 | 2.8 | ±4.0 | ±22  | Low Noise, Precision            | 626             |
| OP-37EP  | 0.040  | 0.025 | 0.2 | 35     | 1000 | 40  | 17  | ±4.0 | ±22  | Low Noise, Precision            | 626             |
| OP-27FP  | 0.055  | 0.060 | 0.3 | 50     | 1000 | 40  | 17  | ±4.0 | ±22  | Decompensated for               | 626             |
| OP-27GP  | 0.080  | 0.100 | 0.4 | 75     | 700  | 40  | 17  | ±4.0 | ±22  | A <sub>v</sub> ≥ 5              | 626             |
| TL061    | 200 pA | 15    | 10  | 200 pA | 4.0  | 1.0 | 3.5 | ±3.0 | ±18  | Single Bifet Low power          | 626,693         |
| TL061A   | 200 pA | 6.0   | 10  | 200 pA | 4.0  | 1.0 | 3.5 | ±3.0 | ±18  | Single Bifet Low power          | 626,693         |
| TL061B   | 200 pA | 3.0   | 10  | 100 pA | 3.0  | 1.0 | 3.5 | ±3.0 | ±18  | Single Bifet Low power          | 626,693         |
| TL071AC  | 200 pA | 6.0   | 10  | 50 pA  | 50   | 4.0 | 13  | ±5.0 | ±18  | Low Noise, JFET Input           | 626             |
| TL071BC  | 200 pA | 3.0   | 10  | 50 pA  | 50   | 4.0 | 13  | ±5.0 | ±18  | Low Noise, JFET Input           | 626             |
| TL071C   | 200 pA | 10    | 10  | 50 pA  | 25   | 4.0 | 13  | ±5.0 | ±18  | Low Noise, JFET Input           | 626,693,751     |
| TL081AC  | 200 pA | 6.0   | 10  | 100 pA | 50   | 4.0 | 13  | ±5.0 | ±18  | JFET Input                      | 626,693         |
| TL081BC  | 200 pA | 3.0   | 10  | 100 pA | 50   | 4.0 | 13  | ±5.0 | ±18  | JFET Input                      | 626,693         |
| TL081C   | 400 pA | 15    | 10  | 200 pA | 25   | 4.0 | 13  | ±5.0 | ±18  | JFET Input                      | 626,693,751     |

**Industrial Temperature Range (−25°C to +85°C)**

|          |       |       |     |    |      |     |     |      |     |                      |         |
|----------|-------|-------|-----|----|------|-----|-----|------|-----|----------------------|---------|
| MC33071  | 0.5   | 3.5   | 10  | 75 | 25   | 4.5 | 13  | +3.0 | +44 | High Performance     | 626,693 |
| MC33071A | 0.5   | 1.5   | 10  | 50 | 50   | 4.5 | 13  | +3.0 | +44 | Single Supply        | 626,693 |
| OP-27E   | 0.040 | 0.025 | 0.2 | 35 | 1000 | 8.0 | 2.8 | ±4.0 | ±22 | Low Noise, Precision | 601,693 |
| OP-27F   | 0.055 | 0.060 | 0.3 | 50 | 1000 | 8.0 | 2.8 | ±4.0 | ±22 | Low Noise, Precision | 601,693 |
| OP-27G   | 0.080 | 0.100 | 0.4 | 75 | 700  | 8.0 | 2.8 | ±4.0 | ±22 | Low Noise, Precision | 601,693 |
| OP-37E   | 0.040 | 0.025 | 0.2 | 35 | 1000 | 40  | 17  | ±4.0 | ±22 | Low Noise, Precision | 601,693 |
| OP-37F   | 0.055 | 0.060 | 0.3 | 50 | 1000 | 40  | 17  | ±4.0 | ±22 | Decompensated for    | 601,693 |
| OP-37G   | 0.080 | 0.100 | 0.4 | 75 | 700  | 40  | 17  | ±4.0 | ±22 | A <sub>v</sub> ≥ 5   | 601,693 |