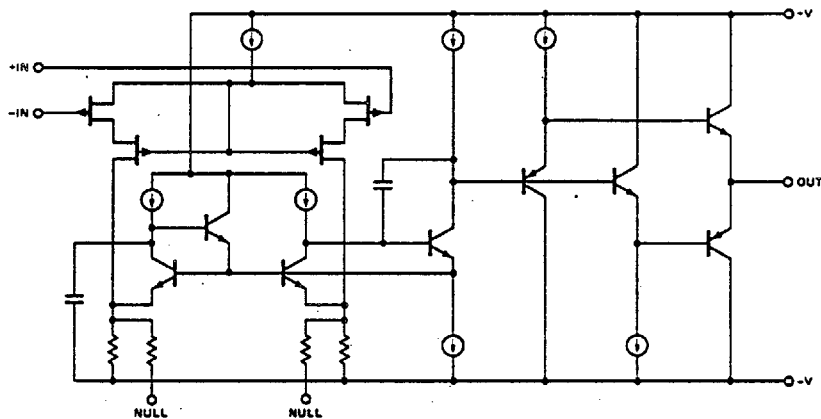


# Operational Amp - Radiation Hardened OP43RP

Low Bias Current, Fast  
JFET Operational Amplifier

## For Space Applications

SEI's OP43RP (RP for RAD-PAK™) high speed CMOS microcircuit features a minimum 100-kilorad (Si) total dose tolerance. Fully equivalent to the commercial OP43, the OP43RP combines Precision Monolithic's fast JFET process and SEI's radiation hardened RAD-PAK™ packaging. Capable of surviving space environments, the OP43RP is ideal for satellite, spacecraft, and space probe missions.



RAD-PAK™ incorporates radiation shielding in the microcircuit package. It eliminates box shielding while providing lifetime in orbit:

- ▲ 100-Krad (Si) total dose survivability
- ▲ Mitigation of dose enhancement
- ▲ High-rel die attachment
- ▲ Class S packaging and screening

The OP43RP, capable of slew rates up to 6 V/us and a gain bandwidth product of 2.4 MHz, features the same system performance and architecture as the commercial PMI counterpart.

Space Electronics Inc. offers RAD-PAK™ hardening for other microcircuits, per customer requirements.



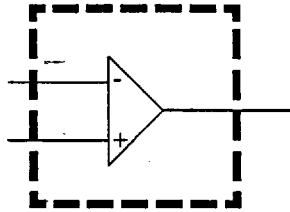
SPACE  
ELECTRONICS  
INCORPORATED

Tel: (619) 452-4167 Fax: (619) 452-5499

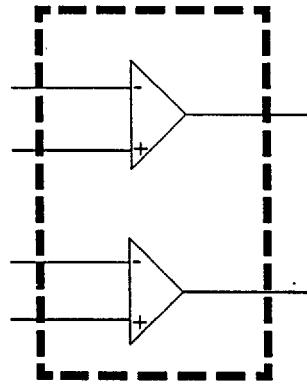
# Radiation Hardened

## OP43RP

Low Bias Current, Fast  
JFET Operational Amplifier



OP43RP5 Single Driver  
8 Pin T0-99 Package



OP43RPF Dual Driver  
16 Pin Flat Pack

### Features

- ▲ Low Bias Current: 5 pA max
- ▲ Pin Compatible to PMI OP-43
- ▲ RAD-PAK™ Radiation Hardened  
Against Natural Space Radiation
- ▲ Total Dose Hardness >100 Krad (Si)
- ▲ Package:
  - 16 Pin RAD-PAK™ flat pack  
(0.440 in. x 0.250 in.)
  - Weight - 3 grams
  - 8 Pin RAD-PAK™ T0-99  
(0.370 in. diameter x 0.275 in.)
  - Weight - 2 grams
- ▲ Low Power JFET Technology
  - 1.2 mA Max. Supply Current - Single
  - 2.4 mA Max. Supply Current - Dual
- ▲ Fast JFET Operational Amp
  - High Slew Rate  $\pm 5$  V/us Min
  - Overload Recovery Time 3.5 us Max
- ▲ High Gain Operational Amp
  - Gain 1000 V/mV Min
  - Gain-Bandwidth Product 2.4 MHz Typ
  - Power Bandwidth 100 kHz Typ
  - High Common Mode Rejection 100 dB Min.
  - Low Harmonic Distortion <0.01% at 5 kHz
- ▲ Screening per TM 5004
- ▲ QCI per TM5005

Specifications and design are subject to change without notice.



June 1995

For Further Information Contact:  
**Space Electronics Inc.**

4031 Sorrento Valley Blvd., San Diego, CA 92121  
(619) 452-4167 Fax (619) 452-5499