MODEL JF-77 JFET INTEGRATOR

PRODUCT DESCRIPTION

The JF-77 is a single channel integrating amplifier module designed for use with infrared detectors operating in the temperature range from 45 to 77 K. It consists of a hybrid circuit containing a balanced JFET integrating amplifier with a voltage gain of 0.90, an input capacitance of 7.5 pf and a read noise of less than 30 electrons. The charge compensated JFET reset switch provides for rapid and accurate reset of the input to ground potential and the device is designed for continuous non-destructive read-out by sampling the output. Output impedance is less than 100 K ohms. Power dissipation is less than 50 μW at 77K.

SPECIFICATIONS

NO. OF CHANNELS	1
PACKAGE	Standard TO-5, 10 pin header Lead length: 0.170 inches Weepage path: 0.120 inch long gap located in seal between TO-5 base and TO-5 lid
NO. OF ACTIVE LEADS	7
OPERATING TEMPERATURE	45K to 77K
TOTAL POWER DISSIPATION	<50μW
SUPPLY VOLTAGES	± 1.5 V (nominal)
OFFSET VOLTAGE	< 12 mV
INPUT CAPACITANCE	7.5 pf (nominal) 10 pf (max)
GATE CURRENT	<50 electrons/sec
READ NOISE	<30 electrons for 2 sec integrations
RESET PULSE AMPLITUDE	1.2 - 1.9 V (nominal: exact values provided for each unit) 5 V (max for device safety)
COMP. PULSE AMPLITUDE	10 V (max for device safety)
SOLDERABILITY	Wires can be soldered to pins using a low temperature iron with low temperature indium solder.
STORAGE CONDITIONS	Vacuum of <500 Torr Backfill with dry nitrogen gas before removing from vacuum.
BAKE-OUT CONDITIONS	Vacuum bake-out at 80 °C