

130MHz, Four Quadrant, Current Output Analog Multiplier

November 1996

Features

- Low Multiplication Error 1.5%
- Input Bias Currents $8\mu\text{A}$
- Y Input Feedthrough at 5MHz -50dB
- Wide Y Channel Bandwidth 130MHz
- Wide X Channel Bandwidth 75MHz

Applications

- Military Avionics
- Medical Imaging Displays
- Video Mixers
- Sonar AGC Processors
- Radar Signal Conditioning
- Voltage Controlled Amplifier
- Vector Generator

Ordering Information

PART NUMBER	TEMP. RANGE (°C)	PACKAGE	PKG. NO.
HA3-2557-9	-40 to 85	16 Ld PDIP	E16.3
HA9P2557-9	-40 to 85	16 Ld SOIC	M16.3

Description

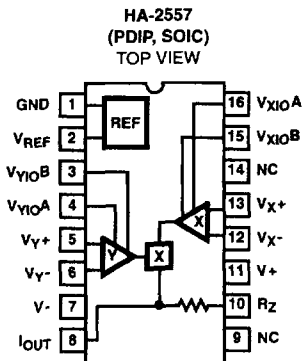
The HA-2557 is a monolithic, high speed, four quadrant, analog multiplier constructed in Harris' Dielectrically Isolated High Frequency Process. The single-ended current output of the HA-2557 has a 130MHz signal bandwidth ($R_L = 50\Omega$). High bandwidth and low distortion make this part an ideal component in video systems.

The suitability for precision video applications is demonstrated further by low multiplication error (1.5%), low feedthrough (-50dB), and differential inputs with low bias currents ($8\mu\text{A}$). The HA-2557 is also well suited for mixer circuits as well as AGC applications for sonar, radar, and medical imaging equipment.

The current output of the HA-2557 allows it to achieve higher bandwidths than voltage output multipliers. Full scale output current is trimmed to 1.6mA. An internal 2500Ω feedback resistor is also provided to accurately convert the current, if desired, to a full scale output voltage of $\pm 4\text{V}$. The HA-2557 is not limited to multiplication applications only; frequency doubling and power detection are also possible.

For MIL-STD-883 compliant product consult the HA-2557/883 datasheet.

Pinout



Schematic

