

**Dual Long-Tailed Pair Transistor Array**

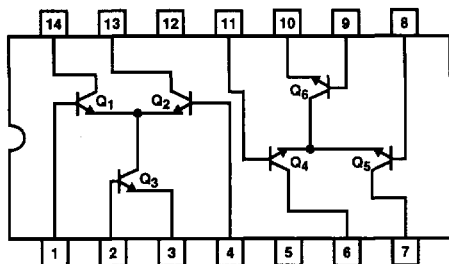
The HFA3102 is an all NPN transistor array configured as dual differential amplifiers with tail transistors. Based on Harris bonded wafer UHF-1 SOI process, this array achieves very high  $f_T$  (10GHz) while maintaining excellent  $h_{FE}$  and  $V_{BE}$  matching characteristics over temperature. Collector leakage currents are maintained to under 0.01nA.

**Ordering Information**

PART NUMBER	TEMP. RANGE (°C)	PACKAGE	PKG. NO.
HFA3102B	-40 to 85	14 Ld SOIC	M14.15
HFA3102B96	-40 to 85	14 Ld SOIC Tape and Reel	M14.15

**Pinout/Functional Diagram**

HFA3102  
(SOIC)  
TOP VIEW



**Features**

- High Gain-Bandwidth Product ( $f_T$ ) . . . . . 10GHz
- High Power Gain-Bandwidth Product . . . . . 5GHz
- High Current Gain ( $h_{FE}$ ) . . . . . 70
- Noise Figure (Transistor) . . . . . 3.5dB
- Low Collector Leakage Current . . . . . <0.01nA
- Excellent  $h_{FE}$  and  $V_{BE}$  Matching
- Pin-to-Pin to UPA102G

**Applications**

- Single Balanced Mixers
- Wide Band Amplification Stages
- Differential Amplifiers
- Multipliers
- Automatic Gain Control Circuits
- Frequency Doublers, Triplers
- Oscillators
- Constant Current Sources
- Wireless Communication Systems
- Radio and Satellite Communications
- Fiber Optic Signal Processing
- High Performance Instrumentation

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SIGNAL  
PROCESSING