

5 GHz SiGe Transistors Provide Low Noise, Low Current and Low Cost

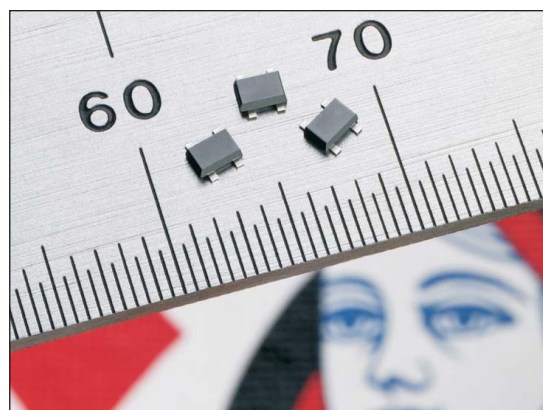
Two new microwave transistors from NEC use SiGe technology to deliver low noise and low power consumption that challenges GaAs, but at a much lower cost

Following the recent introduction of the world's first 5 GHz NPN Silicon Germanium (SiGe) transistors, NEC has now added two new versions to the series. These low noise and high associated gain devices

combine the performance advantages of GaAs with the cost advantages of silicon, for use as LNA devices in WLAN, cordless phones, and short-range wireless applications. Typical specifications are listed in Table 1.

Both transistors are fabricated using NEC's new Silicon Germanium UHS2-HV (High Voltage) wafer process. This process yields devices that can use both a wider and higher range of power supply voltages for more design flexibility.

Both the NESG2021 and NESG2031 are housed in a new, miniature, low profile M05 package with flat leads to improve RF performance. Based on the SOT-343 footprint, the M05 is 0.59 mm high and measures just 2.0 x 1.25 mm. Design samples are available now



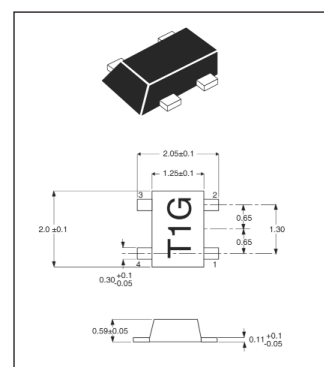
from California Eastern Laboratories (CEL) with mass production scheduled to start in October 2002. With pricing at just 35¢ for the NESG2021 and 37¢ for the NESG2031 (in 100k quantities) they offer a considerable cost advantage over GaAs devices delivering similar performance.

For more information, including data sheets and the location of the sales office nearest to you, contact:

California Eastern Laboratories
www.cel.com
HFelink 303

	NESG2021M05 @ 2 V, 3 mA	NESG2031M05 @ 2 V, 5 mA
Noise Figure @ 2GHz	0.9 dB	0.8 dB
Noise Figure @ 5.2GHz	1.3 dB	1.3 dB
Associated Gain @ 2GHz	18 dB	17 dB
Associated Gain @ 5.2GHz	11 dB	10 dB
Maximum Stable Gain (MSG) @ 2 GHz	22.5 dB	21.5 dB
Maximum V _{CEO}	5 V	5 V
Maximum I _C	35 mA	35 mA

Typical performance specifications.



Outline drawing.