0.5um Switch PHEMT Process



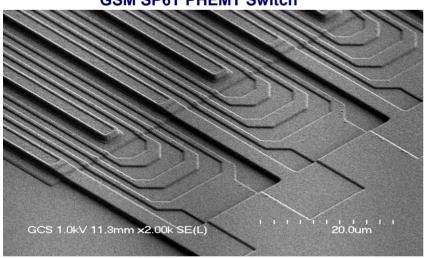
- GCS has developed a low-cost, highperformance PHEMT process specifically for cell phone and WLAN RF Switch and LNA applications
- Process includes semiconductor resistor and MIM capacitor
- Low insertion loss, high isolation and low harmonics
- This process has been qualified and in production since 2003

Low Cost PHEMT Switch for GSM

W75 TX2 2nd



GSM SP6T PHEMT Switch



GCS SP6T Harmonics Performance Freq=880 MHz Pin=34 dBm DOE269 -20 Harmonics (dBm) ◆ W61 TX1 2nd W61 TX2 2nd - W75 TX1 2nd

4.5

5

pu -50

-60

2.5

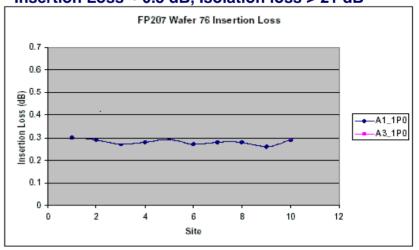
3

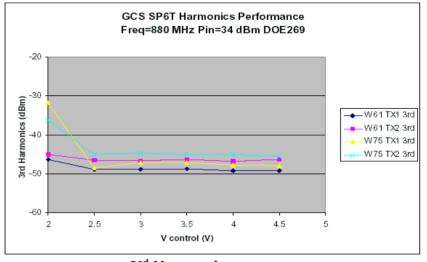
3.5

V control (V)

2nd Harmonic

Insertion Loss ~ 0.3 dB. Isolation loss > 21 dB





3rd Harmonic

PHEMT GSM Switch Performance Benchmarking



GCS' PHEMT GSM switches generate harmonic levels lower than other foundries'

