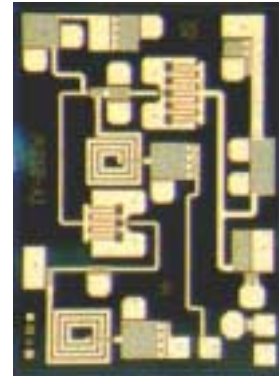


## 13.75 - 14.5 GHz 21 dBm MMIC

### PHOTO ENLARGEMENT

#### FEATURES

- P<sub>1</sub> dB: 21 dBm
- Small Signal Gain: 16 dB
- IP3: 30 dBm
- Bias Condition: 120mA@8V

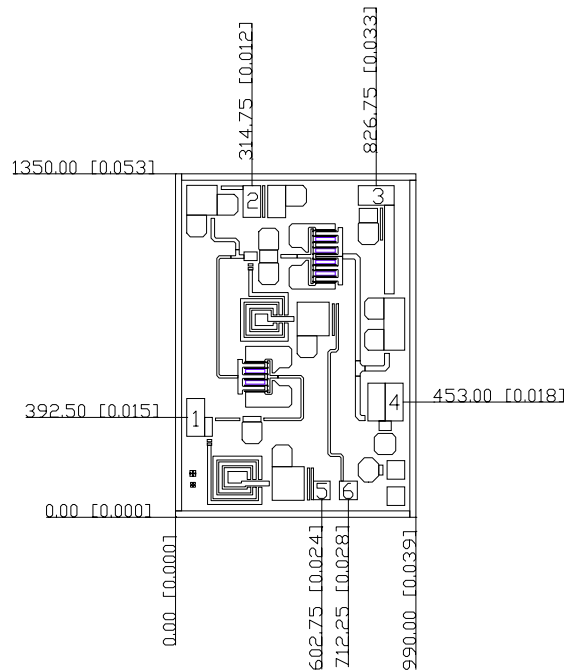
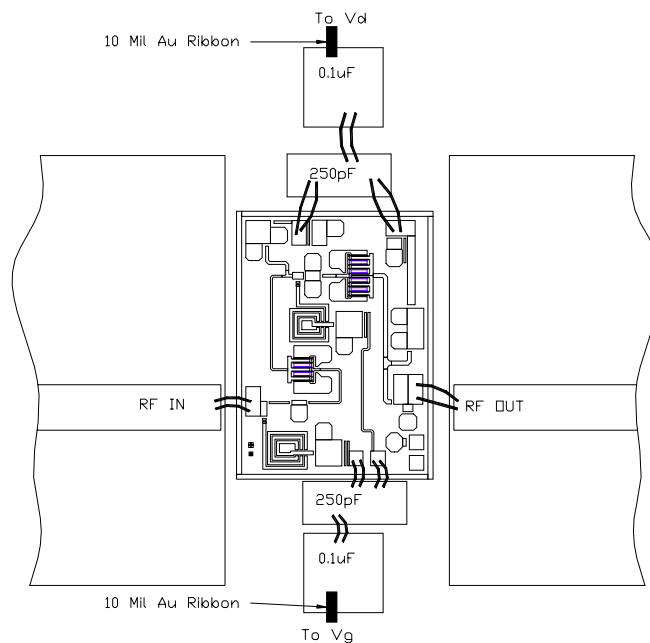


#### DESCRIPTION

The TC1953A is a two stages PHEMT medium power amplifier MMIC that operates from 13.75 to 14.5 GHz. The amplifier provides a minimum of 16 dB gain and delivers 21 dBm output power from 13.75 to 14.5GHz. The MMIC is fabricated using Transcom's proprietary matured GaAs PHEMT process. The process features full passivation for increased performance and reliability. All devices are 100 % DC tested to assure consistent quality. Bond pads are gold plated for either thermocompression or thermosonic wire bonding. Backside gold plating is compatible with standard AuSn die-attach.

#### ELECTRICAL SPECIFICATIONS (Ta = 25 °C)

SYMBOL	DESCRIPTION	MIN	TYP	MAX	UNITS
<b>FREQ</b>	Frequency Range	13.75		14.5	GHz
<b>SSG</b>	Small Signal Gain	16	17		dB
<b>P1dB</b>	Output Power at 1 dB Gain Compression	20	21		dBm
<b>P3 dB</b>	Output Power at 3 dB Gain Compression	21	22		dBm
<b>IP3</b>	Third Order Intercept Point	29	30		dBm
<b>VSWR, IN</b>	Input Return Loss		2:1		
<b>VSWR, OUT</b>	Output Return Loss		2:1		
<b>VDD</b>	Supply Voltage		8		Volt
<b>Vg</b>	Gate Voltage	-0.5	-1.0	-1.5	Volt
<b>IDD</b>	Current Supply Without RF		120		mA

**MECHANICAL OUTLINE (in um)**

**ASSEMBLY DIAGRAM**


**TYPICAL PERFORMANCE**
