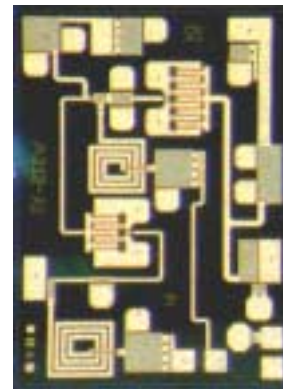


13.75 - 14.5 GHz 21 dBm MMIC

FEATURES

- P₁ dB: 21 dBm
- Small Signal Gain: 16 dB
- IP3: 30 dBm
- Bias Condition: 120mA@8V

PHOTO ENLARGEMENT



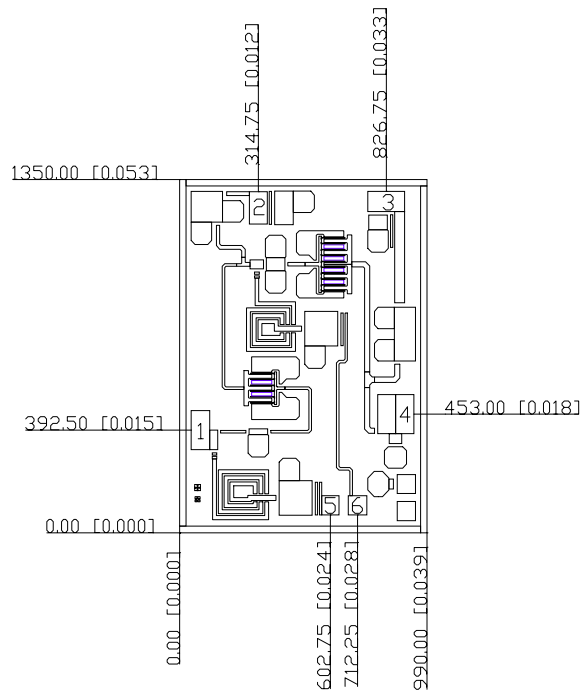
DESCRIPTION

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.

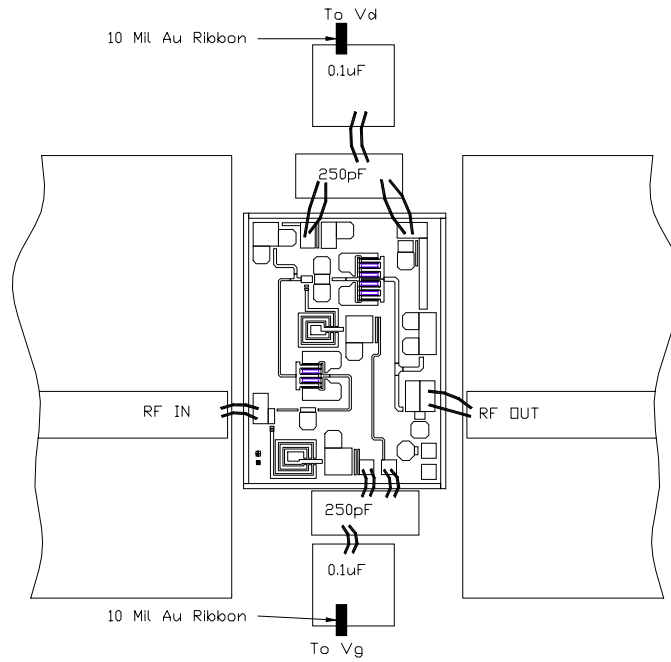
ELECTRICAL SPECIFICATIONS (Ta = 25 °C)

SYMBOL	DESCRIPTION	MIN	TYP	MAX	UNITS
FREQ	Frequency Range	13.75		14.5	GHz
SSG	Small Signal Gain	16	17		dB
P1dB	Output Power at 1 dB Gain Compression	20	21		dBm
P3 dB	Output Power at 3 dB Gain Compression	21	22		dBm
IP3	Third Order Intercept Point	29	30		dBm
VSWR, IN	Input Return Loss		2:1		
VSWR, OUT	Output Return Loss		2:1		
VDD	Supply Voltage		8		Volt
Vg	Gate Voltage	-0.5	-1.0	-1.5	Volt
IDD	Current Supply Without RF		120		mA
ID P₁ dB	Current Supply @ Pout = P ₁ dB		120		mA
ηa	Power Added Efficiency		13		%

MECHANICAL OUTLINE (in um)



ASSEMBLY DIAGRAM



TYPICAL PERFORMANCE
