

Preliminary

**9.2 – 10.2 GHz 39 dBm MMIC****FEATURES**

- P<sub>2</sub> dB: 39 dBm
- Small Signal Gain: 16 dB
- Bias Condition: 2500 mA @ 9V

**DESCRIPTION**

The TC1076 is a two stages PHEMT high power amplifier MMIC that operates from 9.2 to 10.2 GHz. The amplifier provides a typical of 16 dB Gain and delivers 38 dBm of P<sub>2</sub>dB. 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 thermocompression wire bonding. Backside gold plating is compatible with standard AuSn die-attach.

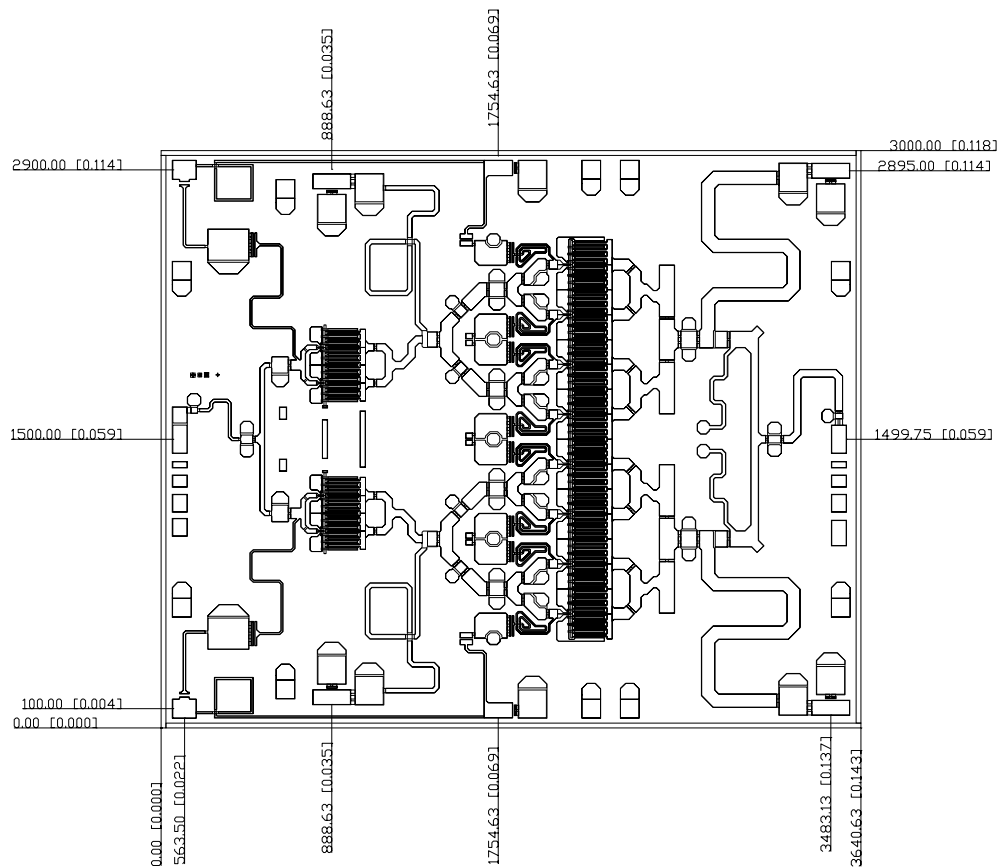
**ELECTRICAL SPECIFICATIONS (T<sub>A</sub>=25 °C)**

Symbol	Conditions	MIN	TYP	MAX	UNIT
<b>FREQ</b>	Frequency Range	9.2		10.2	GHz
<b>SSG</b>	Small Signal Gain		16		dB
<b>P<sub>2</sub> dB</b>	Output Power at 2 dB Gain Compression	38	39		dBm
<b>VSWR, IN</b>	Input VSWR		2.5:1		-
<b>VDD</b>	Supply Voltage		9		Volt
<b>V<sub>g</sub></b>	Gate Voltage		-0.8		Volt
<b>IDD</b>	Bias Current		2500		mA
<b>η<sub>a</sub></b>	Power Added Efficiency		28		%

**MECHANICAL OUTLINE**

Units: micrometer (inch)

Thickness: 76.2 (0.003)

Chip Size:  $\pm 58$  (0.002)

**ASSEMBLY DIAGRAM**

- Note: Using 1mil Au Wire

