



TMP033-038-09-42

PRE.1\_09/26/2005

## - Preliminary - 16W PCB Module for 3.3-3.8GHz WiMax/WLL Applications

### FEATURES

- 16 W Typical Power at 3.5 GHz
- 9 dB Typical Linear Power Gain at 3.5 GHz
- High Linearity: IP3 = 52 dBm Typical
- High Power Added Efficiency:  
Nominal PAE of 37 %
- 50 ohm Fully Matched
- 100 % DC and RF Tested
- For WiMax and WLL application

### DESCRIPTION

TMP033-038-09-42 is a fully matched PA module with excellent performances and high circuit integration for 3.5 GHz WiMax and WLL applications. It offers the advantages of high power performance, flexibility and low cost. TMP033-038-09-42 is a single-stage PA module using Transcom's own proprietary PHEMT devices which can provide outstanding linearity and high gain performance. The RF input and output of this module are fully matched for 50 ohm operation.

### ELECTRICAL SPECIFICATIONS

Symbol	CONDITIONS	MIN	TYP	MAX	UNIT
FREQ	Frequency Range	3.3	3.5	3.8	GHz
P <sub>1dB</sub>	Output Power at 1dB Gain Compression Point, f=3.4 – 3.6GHz	41.5	42.5		dBm
	Output Power at 1dB Gain Compression Point, f=3.3 – 3.8GHz	41.0	42.0		dBm
G <sub>L</sub>	Linear Power Gain, f=3.4 – 3.6GHz	8	9		dB
	Linear Power Gain, f=3.3 – 3.8GHz	7	8		dB
IP3	Intercept Point of the 3 <sup>rd</sup> -order Intermodulation, f=3.3 – 3.8GHz, *P <sub>SCL</sub> = 28 dBm		52		dBm
PAE	Power Added Efficiency at 1dB Compression Power		37		%
V <sub>ds</sub>	Supply Voltage		10		Volt
V <sub>g</sub>	Gate Voltage**		-5		Volt
I <sub>dsq</sub>	DC Quiescent Current (RF OFF)		4		A
OT	Operation Temperature	-40		70	°C

\* P<sub>SCL</sub>: Output Power of Single Carrier Level, delta frequency=5MHz.

