

- Preliminary - 12W PCB Module for 3.3-3.8GHz WiMax/WLL Applications
FEATURES

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

DESCRIPTION

TMP033-038-14-40 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. TMP033-038-14-40 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 _{1dB} | Output Power at 1dB Gain Compression Point, f=3.4 – 3.6GHz | 39.5 | 41 | | dBm |
| | Output Power at 1dB Gain Compression Point, f=3.3 – 3.8GHz | 39.0 | 40.5 | | dBm |
| G _L | Linear Power Gain, f=3.4 – 3.6GHz | 12 | 14 | | dB |
| | Linear Power Gain, f=3.3 – 3.8GHz | 11 | 13 | | dB |
| IP3 | Intercept Point of the 3 rd -order Intermodulation, f=3.3 – 3.8GHz, *P _{SCL} = 28 dBm | | 50 | | dBm |
| PAE | Power Added Efficiency at 1dB Compression Power | | 37 | | % |
| V _{ds} | Supply Voltage | | 10 | | Volt |
| V _g | Gate Voltage | | -5 | | Volt |
| I _{dsq} | DC Quiescent Current (RF OFF) | | 2.5 | | A |
| OT | Operation Temperature | -40 | | 70 | °C |

* P_{SCL}: Output Power of Single Carrier Level, delta frequency=5MHz.