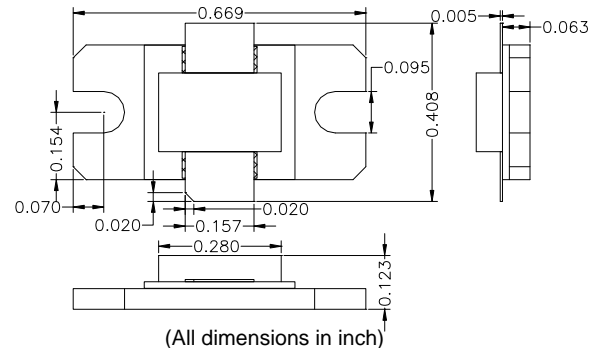


DESCRIPTION

AMCOM's AM100MX-CU-R is a part of the CU series of GaAs MESFETs. This part has a total gate width of 10mm. The AM100MX-CU-R is designed for high power microwave applications, operating up to 6GHz. The CU series is in a specially designed ceramic package with straight leads and flange in a drop-in mounting style. The flange at the bottom of the package serves simultaneously as DC ground, RF ground and thermal path. This FET is RoHS Compliant.



FEATURES

- High Frequency Operation up to 6GHz
- High Gain and High Power, $P_{1dB}=35dBm$ @4.1GHz
- Low Cost Ceramic Package
- Copper Tungsten Carrier for Effective Heat Removal

APPLICATIONS

- Wireless Local Loop Network
- PCS Base Stations
- WLAN, Repeaters & HYPERLAN
- C-Band VSAT

RF PERFORMANCE @ 4.1 GHz, ($V_{ds} = 7V$, $I_{ds} = 0.5 I_{dss}$)

| Parameters | MIN | TYP |
|------------------------|-----|-----|
| P_{1dB} * (dBm) | 34 | 35 |
| Eff @ P_{1dB} | 32% | 37% |
| Small Signal Gain (dB) | 9 | 10 |
| IP3 (dBm) | 46 | 48 |

* Power typically remains the same as frequency changes.

ABSOLUTE MAXIMUM RATING

| Parameters | Sym | Rating |
|--|----------|------------|
| Drain-Source Voltage (V) | V_{ds} | 9 |
| Gate-Source Voltage (V) | V_{gs} | -5 |
| Drain Current (mA) | I_{ds} | 3150 |
| Continuous Dissipation At Room Temp. (W) | P_t | 12.5 |
| Operating Temp. ($^{\circ}C$) | T_A | -55 to +85 |
| Max. Channel Temp. ($^{\circ}C$) | T_{ch} | +175 |

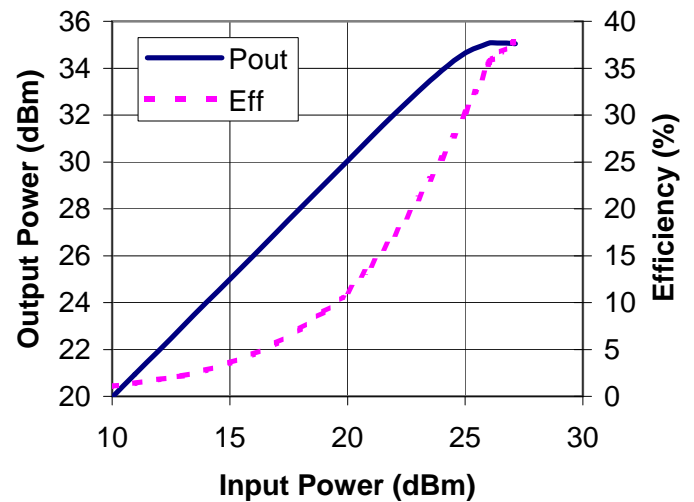
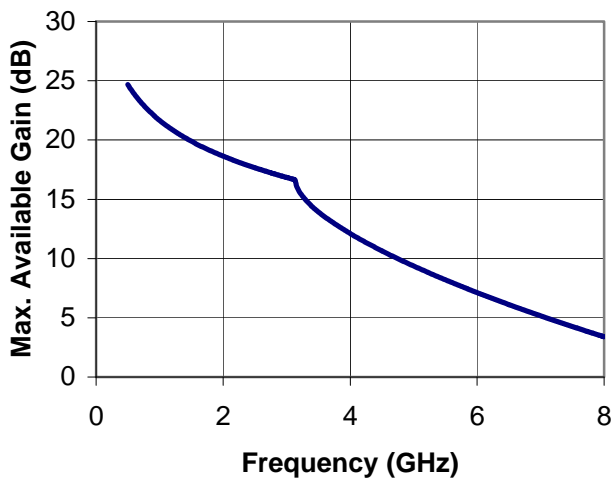
DC PARAMETERS

| Parameters | Conditions | MIN | TYP | MAX |
|---|---|------|------|------|
| Saturation Current I_{dss} (mA) | $V_{ds} = 3V$ $V_{gs} = 0V$ | 1830 | 2200 | 3150 |
| Pinch-off Voltage V_p (V) | $V_{ds} = 3V$ $I_{ds} = 2.5\% I_{dss}$ | -2.6 | -2 | -1.0 |
| Drain to Gate Breakdown Voltage BV_{gd} (V) | $I_{dg} = 1mA/mm$ | 11 | 15 | |
| Drain to Source Voltage V_{ds} (V) | Mounted on Heat Sink | | 7 | |
| Thermal Resistance ($^{\circ}C/W$) | | 12 | | |

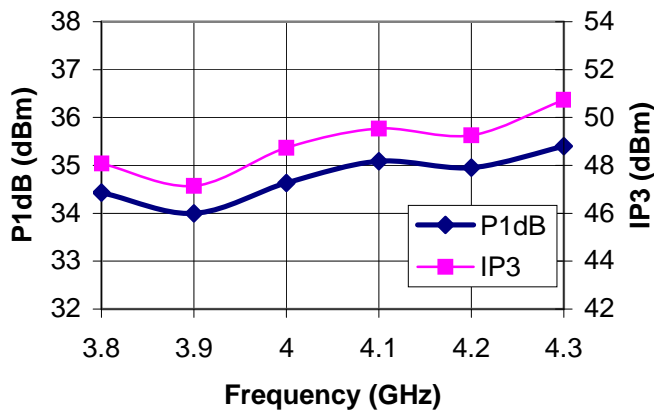
S-Parameters for AM100MX-CU-R @ 7V / 0.5 I_{dss} (s2p file downloadable from the web)

| Freq (MHz) | MAG (S11) | ANG(S11) | MAG (S21) | ANG(S21) | MAG (S12) | ANG(S12) | MAG (S22) | ANG(S22) |
|------------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|
| 1000 | 0.925 | -179.0 | 2.802 | 67.3 | 0.019 | -9.6 | 0.754 | 172.2 |
| 2000 | 0.879 | 160.5 | 2.098 | 28.6 | 0.029 | -34.9 | 0.655 | 161.7 |
| 3000 | 0.722 | 126.1 | 2.809 | -31.1 | 0.058 | -80.8 | 0.469 | 157.7 |
| 4000 | 0.664 | -66.7 | 3.004 | -159.4 | 0.085 | 164.9 | 0.264 | -120.0 |
| 5000 | 0.951 | -149.4 | 0.644 | 115.2 | 0.024 | 93.9 | 0.816 | -152.4 |
| 6000 | 0.978 | -169.3 | 0.209 | 80.7 | 0.009 | 73.2 | 0.924 | -169.4 |
| 7000 | 0.986 | 179.7 | 0.095 | 58.8 | 0.006 | 64.2 | 0.958 | 179.9 |
| 8000 | 0.989 | 171.2 | 0.055 | 42.1 | 0.005 | 58.7 | 0.972 | -171.6 |

V_{ds}=7V, I_{ds}=0.5I_{dss} @ 4.1GHz



V_{ds}=7V, I_{ds}=0.5I_{dss} Test CKT @ 4.1GHz



Specifications subject to change without notice.