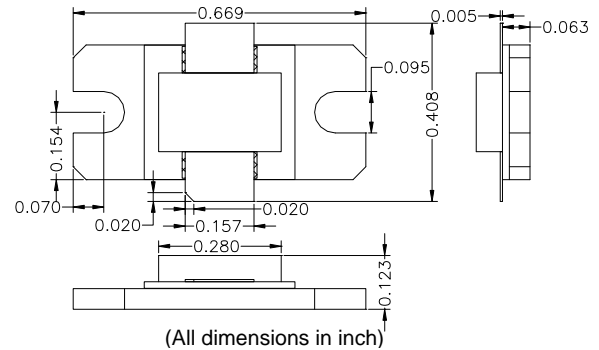


DESCRIPTION

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

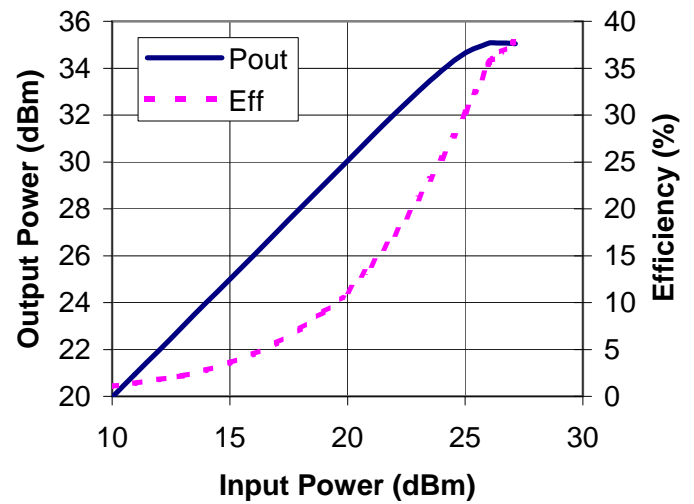
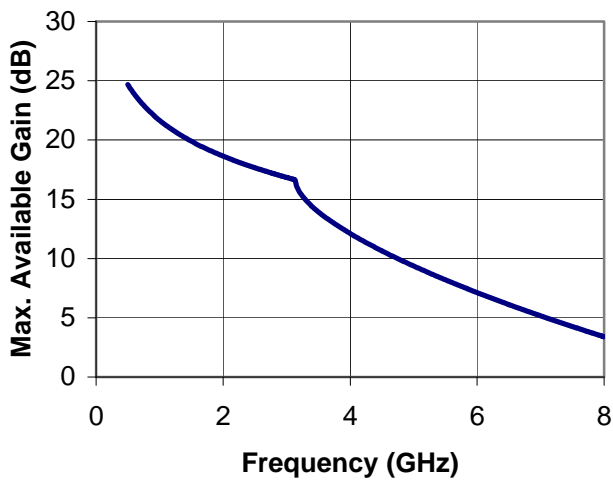
DC PARAMETERS

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		

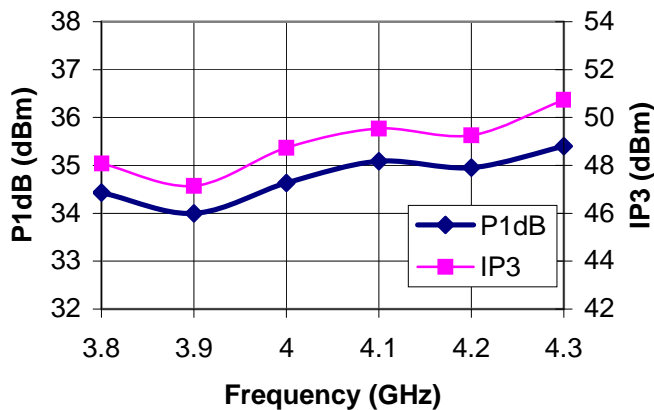
S-Parameters for AM100MX-CU-R @ 7V / 0.5 I_{dss} (s2p file downloadable from the web)

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.