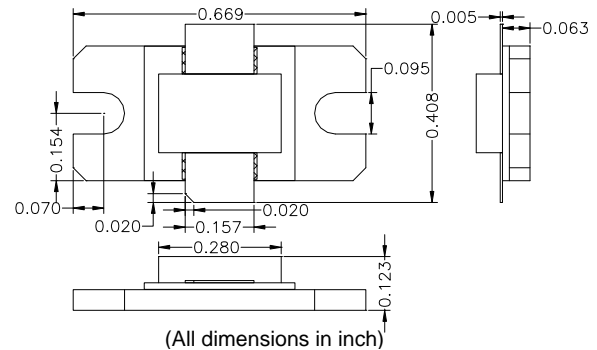




DESCRIPTION

AMCOM's AM300MX-CU-R is part of the CU series of GaAs MESFETs. This part has a total gate width of 30mm. The AM300MX-CU-R is designed for high power microwave applications, operating up to 6GHz. The CU series uses 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, $P_{1dB}=39.5\text{dBm}$ @2.9GHz
- 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 @ 2.9 GHz, ($V_{ds} = 7V$, $I_{ds} = 0.5 I_{dss}$)

Parameters	MIN	TYP
P_{1dB} * (dBm)	38.5	39.5
Eff @ P_{1dB}	25%	30%
Small Signal Gain (dB)	8	9
IP3 (dBm)	49	51

* Power typically remains the same as frequency changes.

ABSOLUTE MAXIMUM RATING

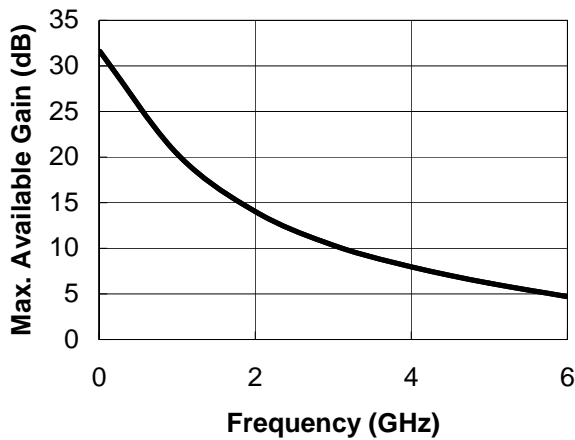
Parameters	Sym	Rating
Drain-Source Voltage (V)	V_{ds}	9
Gate-Source Voltage (V)	V_{gs}	-5
Drain Current (mA)	I_{ds}	9000
Continuous Dissipation At Room Temp. (W)	P_t	38
Operating Temp. ($^{\circ}\text{C}$)	T_A	-55 to +85
Max. Channel Temp. ($^{\circ}\text{C}$)	T_{ch}	+175

DC PARAMETERS

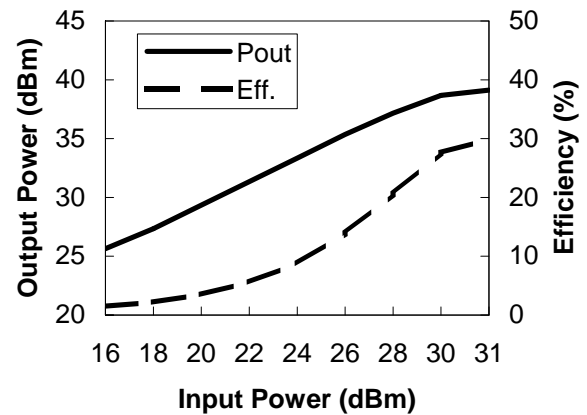
Parameters	Conditions	MIN	TYP	MAX
Saturation Current I_{dss} (mA)	$V_{ds} = 3V$ $V_{gs} = 0V$	5000	7000	9000
Pinch-off Voltage V_p (V)	$V_{ds} = 3V$ $I_{ds} = 2.5\% I_{dss}$	-2.6	-2	-1.0
Drain to Gate Breakdown Voltage BV_{gd} (V)	$I_{dg} = 1\text{mA/mm}$	11	15	
Drain to Source Voltage V_{ds} (V)	Mounted on Heat Sink		7	
Thermal Resistance ($^{\circ}\text{C/W}$)		2.8		

S-Parameters for AM300MX-CU-R @ 7V / 0.5 I_{dss} (s2p file downloadable from the web)

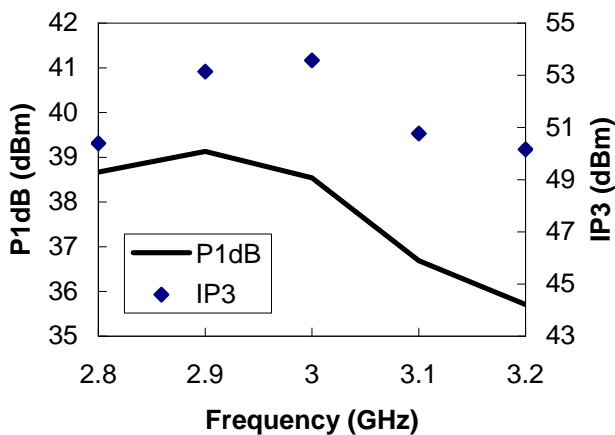
Freq (MHz)	MAG (S11)	ANG(S11)	MAG (S21)	ANG(S21)	MAG (S12)	ANG(S12)	MAG (S22)	ANG(S22)
1000	0.976	175	1.09	72.35	0.0076	2.213	0.918	171.5
2000	0.963	161.9	0.75	48.7	0.0111	-2.177	0.886	160.5
3000	0.920	142.2	0.93	15.81	0.0224	-16.99	0.789	143.3
4000	0.724	89.11	1.79	-51.38	0.0649	-67.81	0.453	106.9
5000	0.791	-83.74	1.51	173.1	0.0783	170.9	0.470	-90.09
6000	0.958	-147.4	0.36	99.83	0.0259	109.7	0.868	-147.1
7000	0.981	-167.1	0.13	70.07	0.0124	89.9	0.946	-166.5
8000	0.988	-178.1	0.06	52.16	0.0081	79.96	0.970	-177.6



V_{ds}=7V, I_{ds}=0.5I_{dss} @2.9GHz



V_{ds}=7V, I_{ds}=0.5I_{dss}, Test CKT @ 2.9GHz



Specifications subject to change without notice.