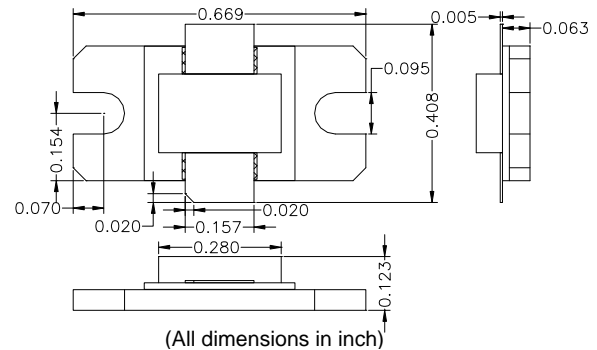




## DESCRIPTION

AM072MX-CU-R is a GaAs MESFET in high-power ceramic CU package. This part has a total gate width of 7.2mm. The AM072MX-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 Cu/W 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 product is RoHS compliant as denoted by -R.



## FEATURES

- High Frequency Operation up to 6GHz
- High Gain and High Power,  $P_{1dB}=34dBm$  @3.5GHz
- 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 @ 3.5 GHz, ( $V_{ds} = 7V$ , $I_{ds} = 0.5 I_{dss}$ )

Parameters	MIN	TYP
$P_{1dB}$ * (dBm)	33	34
Eff @ $P_{1dB}$	35%	40%
Small Signal Gain (dB)	10	11
IP3 (dBm)	44	46

\* Power typically remains the same as frequency changes.

## ABSOLUTE MAXIMUM RATING

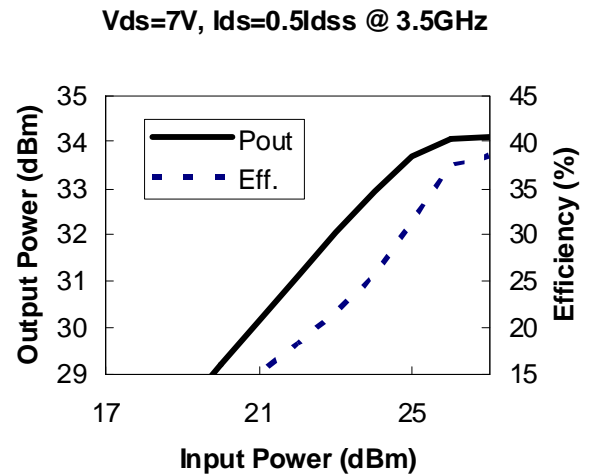
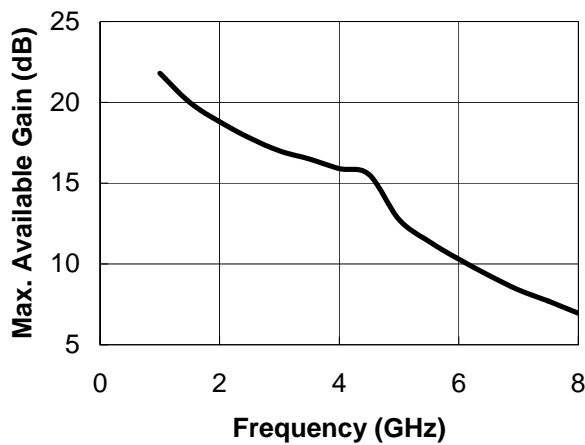
Parameters	Sym	Rating
Drain-Source Voltage (V)	$V_{ds}$	9
Gate-Source Voltage (V)	$V_{gs}$	-5
Drain Current (mA)	$I_{ds}$	2280
Continuous Dissipation At Room Temp. (W)	$P_t$	13
Operating Temp. (°C)	$T_A$	-55 to +85
Max. Channel Temp. (°C)	$T_{ch}$	+175

## DC PARAMETERS

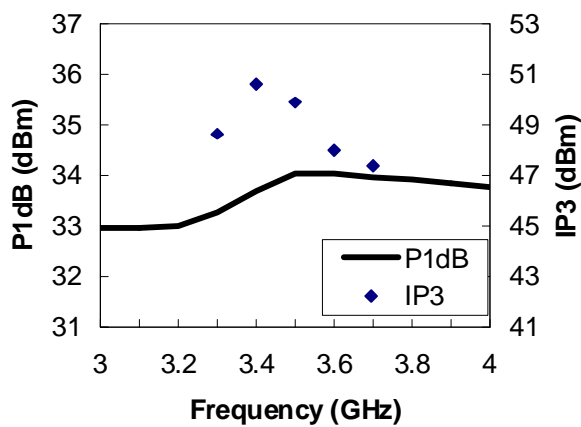
Parameters	Conditions	MIN	TYP	MAX
Saturation Current $I_{dss}$ (mA)	$V_{ds} = 3V$ $V_{gs} = 0V$	1200	1400	2280
Pinch-off Voltage $V_p$ (V)	$V_{ds} = 3V$ $I_{ds} = 2.5\% I_{dss}$	-2.6	-2.0	-1.0
Drain to Gate Breakdown Voltage $BV_{gd}$ (V)	$I_{dg} = 1mA/mm$	11	15	
Drain to Source Voltage $V_{ds}$ (V)	Mounted on Heat Sink		7	
Thermal Resistance (°C/W)		11.3		

**S-Parameters for AM072MX-CU-R @ 7V / 0.5 I<sub>dss</sub> (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	0.915	-170.94	3.295	70.34	0.022	-11.345	0.7	179.625
2000	0.898	172.74	2.030	36.78	0.027	-36.385	0.679	175.312
3000	0.856	157.19	1.972	-0.164	0.038	-64.428	0.649	173.035
4000	0.711	120.61	2.796	-53.4	0.071	-108.15	0.623	166.490
5000	0.720	-84.31	2.928	-171.33	0.090	144.198	0.324	-152.53
6000	0.951	-152.68	0.826	117.086	0.030	88.836	0.750	-159.16
7000	0.974	-170.41	0.330	82.881	0.014	61.740	0.872	-171.01
8000	0.982	179.66	0.169	59.505	0.008	51.071	0.924	-179.78



V<sub>ds</sub>=7V, I<sub>ds</sub>=0.5I<sub>dss</sub> Test CKT @ 3.5GHz



Specifications subject to change without notice.