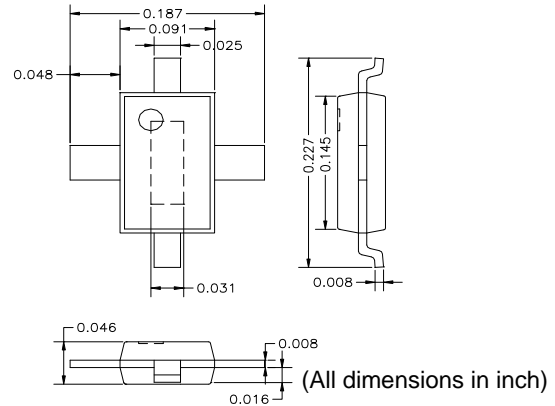


## DESCRIPTION

AM072MX-QF-R is a GaAs MESFET with a total gate width of 7.2mm. It is RoHS compliant (Denoted by -R). The AM072MX-QF-R is designed for high power microwave applications, operating up to 6GHz. The QF series is in a plastic package with straight leads in a drop-in mounting style. The bottom of the package serves simultaneously as DC ground, RF ground, and thermal path.



## FEATURES

- High Frequency Operation up to 6GHz
- High Gain and High Power,  $P_{1dB}=34dBm$  @3.5GHz
- Plastic Package for Low Cost
- 3 Heat Sink Paths 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 @ $P_{1dB}$	38%	42%
Small Signal Gain (dB)	9.5	11
IP3 (dBm)	42	44

\* Power typically remains the same as frequency changes.

## ABSOLUTE MAXIMUM RATING

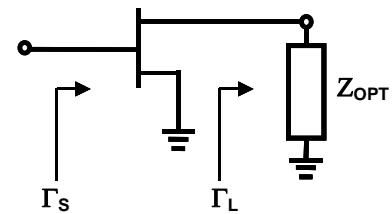
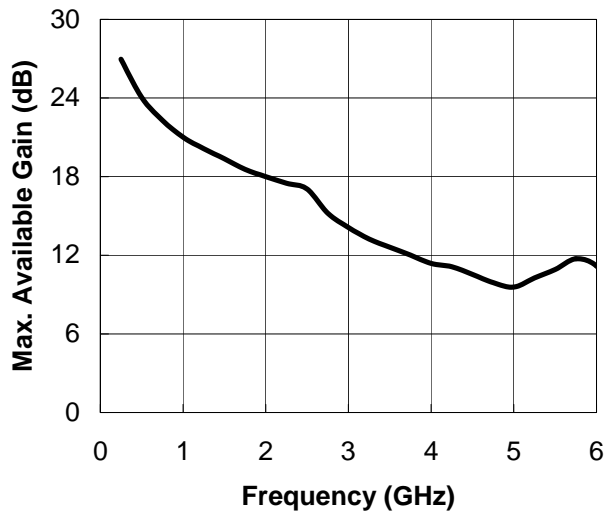
Parameters	Sym	Rating
Drain-Source Voltage (V)	$V_{ds}$	9
Gate-Source Voltage (V)	$V_{gs}$	-5
Drain Current (mA)	$I_{ds}$	2280
Continuous Dissipation At Room Temp. (W)	$P_t$	13
Operating Temp. ( $^{\circ}C$ )	$T_A$	-55 – +85
Max. Channel Temp. ( $^{\circ}C$ )	$T_{ch}$	+175

## DC PARAMETERS

Parameters	Conditions	MIN	TYP	MAX
Saturation Current $I_{dss}$ (mA)	$V_{ds} = 3V$ $V_{gs} = 0V$	1320	1680	2280
Pinch-off Voltage $V_p$ (V)	$V_{ds} = 3V$ $I_{ds} = 2.5\% I_{dss}$	-2.6	-2	-1.2
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	8
Thermal Resistance ( $^{\circ}C/W$ )		11.3		

**S-Parameters for AM072MX-QF-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	0.911	-169.617	2.708	85.535	0.029	9.558	0.712	179.969
2000	0.917	174.984	1.427	64.609	0.03	8.901	0.724	177.039
3000	0.925	167.477	0.956	46.918	0.029	9.474	0.743	168.773
4000	0.932	160.758	0.712	31.729	0.026	17.803	0.76	160.938
5000	0.941	152.586	0.571	17.386	0.027	30.279	0.78	154.516
6000	0.949	143.766	0.491	3.208	0.042	37.422	0.8	145.242
7000	0.938	133.242	0.418	-10.43	0.048	25.7	0.814	139.281
8000	0.939	122.379	0.358	-22.995	0.051	19.929	0.83	133.633



**OPTIMUM LOADS**

Freq GHz	$\Gamma_s$ MAG	$\Gamma_s$ ANG	$\Gamma_L$ MAG	$\Gamma_L$ ANG
1	0.988	-168.78	0.750	-173.62
2	0.988	173.67	0.756	-166.87
3	0.987	162.05	0.765	-159.45
4	0.986	151.43	0.774	-151.08
5	0.985	140.61	0.783	-141.54
6	0.984	128.96	0.790	-130.56

Specifications subject to change without notice.