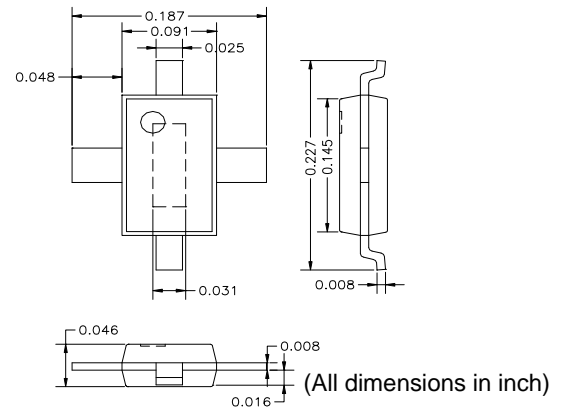


DESCRIPTION

AM036MX-QF-R is a GaAs MESFET with a total gate width of 3.6mm. It is RoHS compliant (Denoted by -R). The AM036MX-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, $P_{1dB}=31\text{dBm}$ @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)	30	31
Eff @ P_{1dB}	38%	42%
Small Signal Gain (dB)	11	12
IP3 (dBm)	40	42

* Power typically remains the same as frequency changes.

ABSOLUTE MAXIMUM RATING

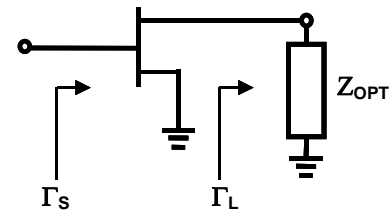
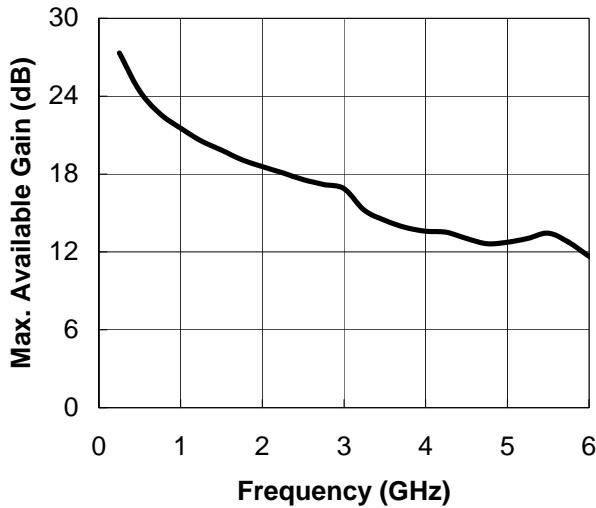
Parameters	Sym	Rating
Drain-Source Voltage (V)	V_{ds}	9
Gate-Source Voltage (V)	V_{gs}	-5
Drain Current (mA)	I_{ds}	1140
Continuous Dissipation At Room Temp. (W)	P_t	6
Operating Temp. ($^{\circ}\text{C}$)	T_A	-55 – +85
Max. Channel Temp. ($^{\circ}\text{C}$)	T_{ch}	+175

DC PARAMETERS

Parameters	Conditions	MIN	TYP	MAX
Saturation Current I_{dss} (mA)	$V_{ds} = 3V$ $V_{gs} = 0V$	660	840	1140
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)	$I_{dg} = 1\text{mA/mm}$	11	15	
Drain to Source Voltage V_{ds} (V)	Mounted on Heat Sink		7	8
Thermal Resistance ($^{\circ}\text{C/W}$)		23.1		

S-Parameters for AM036MX-QF-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	0.876	-156.383	5.625	88.652	0.035	15.532	0.495	-173.125
2000	0.861	174.242	2.994	62.859	0.037	11.649	0.52	178.031
3000	0.871	157.805	2.063	42.127	0.039	9.574	0.532	167.836
4000	0.888	143.906	1.608	22.775	0.041	8.609	0.536	156.539
5000	0.907	129.469	1.346	2.663	0.044	4.497	0.539	142.695
6000	0.913	113.137	1.154	-19.843	0.045	-4.673	0.566	122.961
7000	0.901	93.414	0.998	-40.893	0.044	-15.269	0.587	108.32
8000	0.9	71.23	0.859	-63.66	0.039	-29.539	0.605	94.176



OPTIMUM LOADS

Freq GHz	Γ _s MAG	Γ _s ANG	Γ _L MAG	Γ _L ANG
1	0.980	-151.22	0.557	-176.59
2	0.977	-176.86	0.570	-172.49
3	0.976	168.73	0.589	-167.24
4	0.975	156.08	0.609	-160.61
5	0.973	145.29	0.627	-152.49
6	0.970	133.29	0.640	-142.79

Specifications subject to change without notice.