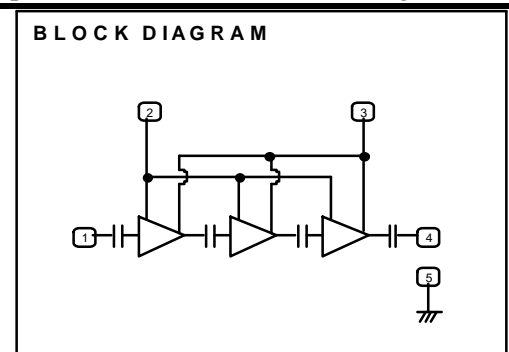
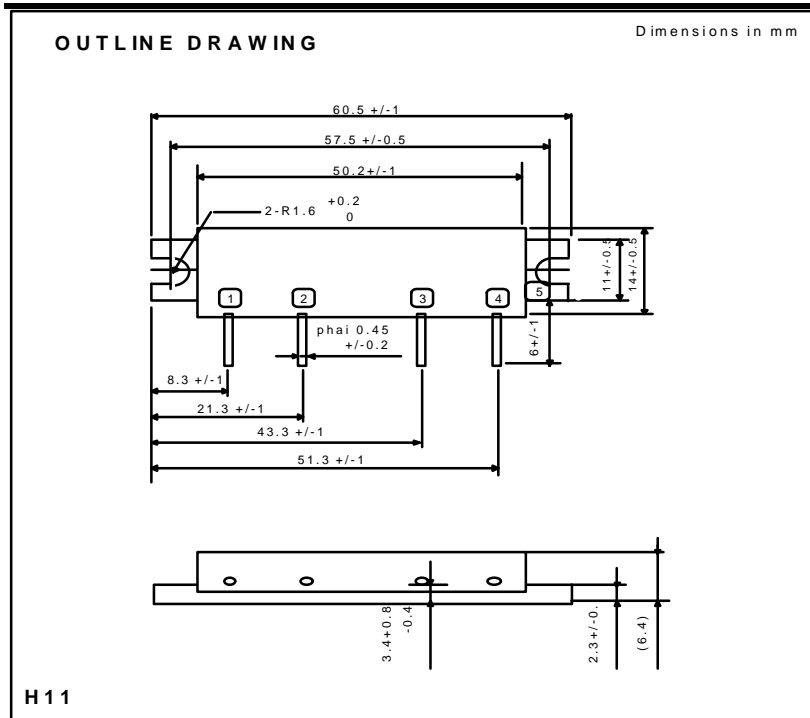


# M68701M

Silicon MOS FET Power Amplifier, 860-915MHz 6W FM /Digital Mobile

**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
SENSITIVE  
DEVICES



PIN:  
 ① P<sub>in</sub> : RF INPUT  
 ② V<sub>G</sub>G : GATE BIAS SUPPLY  
 ③ V<sub>D</sub>D : DRAIN BIAS SUPPLY  
 ④ P<sub>O</sub> : RF OUTPUT  
 ⑤ GND : FIN

**MAXIMUM RATINGS (T<sub>c</sub>=25deg C UNLESS OTHERWISE NOTED)**

SYMBOL	PARAMETER	CONDITIONS	RATINGS	UNIT
VDD	SUPPLY VOLTAGE	V <sub>G</sub> G<5V,Z <sub>G</sub> =Z <sub>L</sub> =50 ohms	17	V
VGG	GATE BIAS VOLTAGE		5.5	V
P <sub>in</sub>	INPUT POWER	f=860-915MHz,Z <sub>G</sub> =Z <sub>L</sub> =50 ohms	10	mW
P <sub>o</sub>	OUTPUT POWER	f=860-915MHz,Z <sub>G</sub> =Z <sub>L</sub> =50 ohms	10	W
T <sub>c</sub> (OP)	OPERATION CASE TEMPERATURE	f=860-915MHz,Z <sub>G</sub> =Z <sub>L</sub> =50 ohms	-30 to +100	deg. C
T <sub>stg</sub>	STORAGE TEMPERATURE		-40 to +110	deg. C

Note: Above parameters are guaranteed independently.

**ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25deg. C ,Z<sub>G</sub>=Z<sub>L</sub>=50 ohms UNLESS OTHERWISE NOTED)**

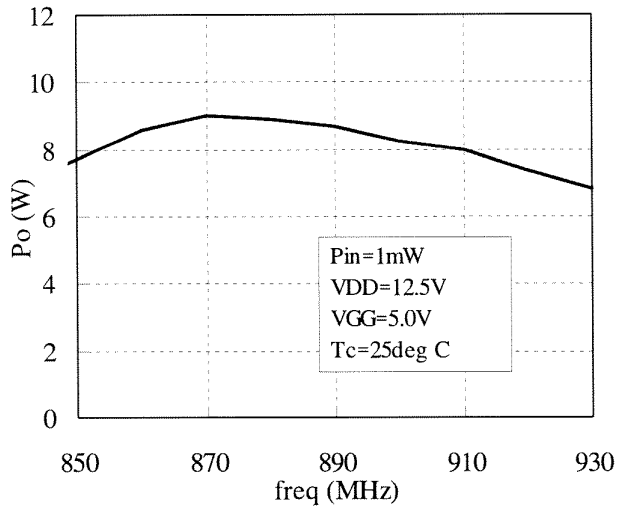
SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS		UNIT
			MIN	MAX	
f	FREQUENCY RANGE		860	915	MHz
P <sub>o</sub>	OUTPUT POWER	V <sub>D</sub> D=12.5V,V <sub>G</sub> G=5V,P <sub>in</sub> =1mW	6		W
Efficiency	TOTAL EFFICIENCY	V <sub>D</sub> D=12.5V, P <sub>out</sub> =6W (V <sub>G</sub> G adjust)	35		%
2f <sub>o</sub>	2nd HARMONIC	P <sub>in</sub> =1mW		-30	dBc
VSWR in	INPUT VSWR			4	-
-	LOAD VSWR TOLERANCE	V <sub>D</sub> D=15.2V,P <sub>in</sub> =1mW,P <sub>o</sub> =6W(V <sub>G</sub> G adjust) Z <sub>G</sub> =50 ohms, LOAD VSWR=20:1	No degradation or destroy		-

ABOVE PARAMETERS, RATINGS, LIMITS AND CONDITIONS ARE SUBJECT TO CHANGE .

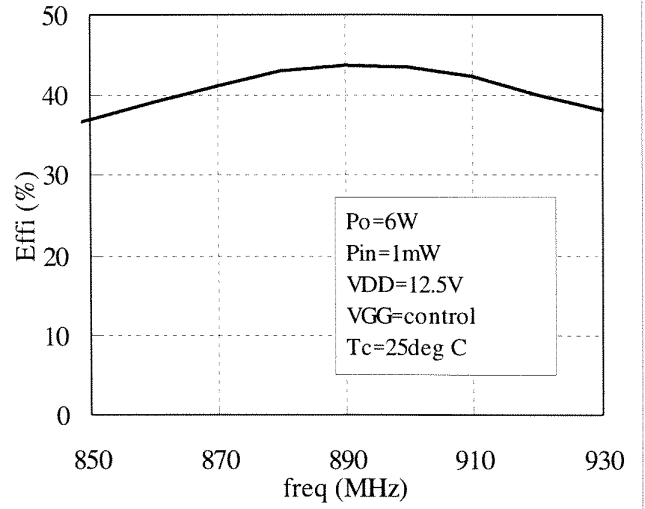
— Keep safety first in your circuit designs! —

Mitsubishi Electric Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage. Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of non-flammable material or (iii) prevention against any malfunction or mishap.

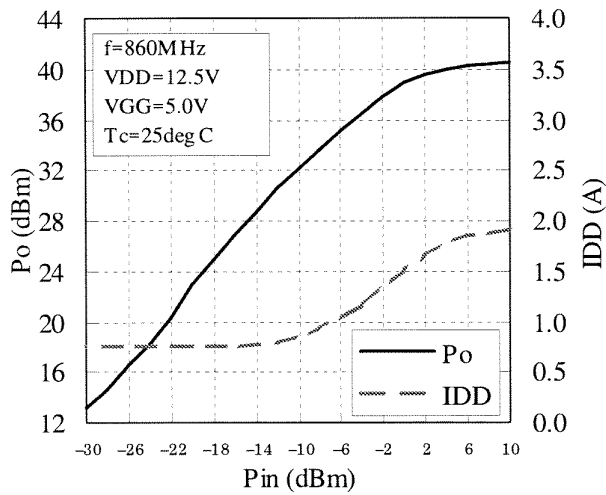
Po vs. freq



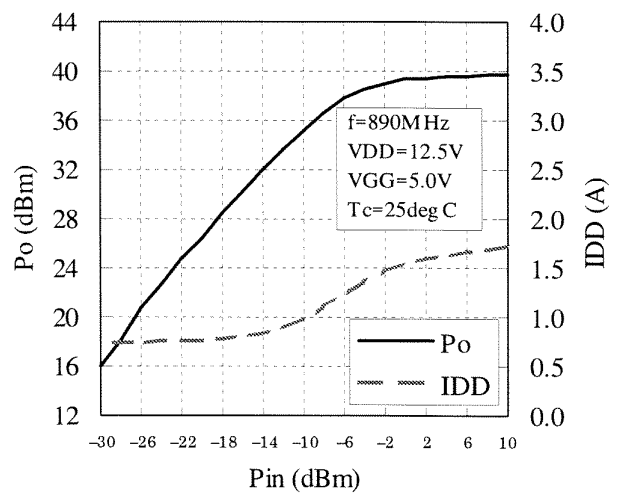
Efficiency vs. freq



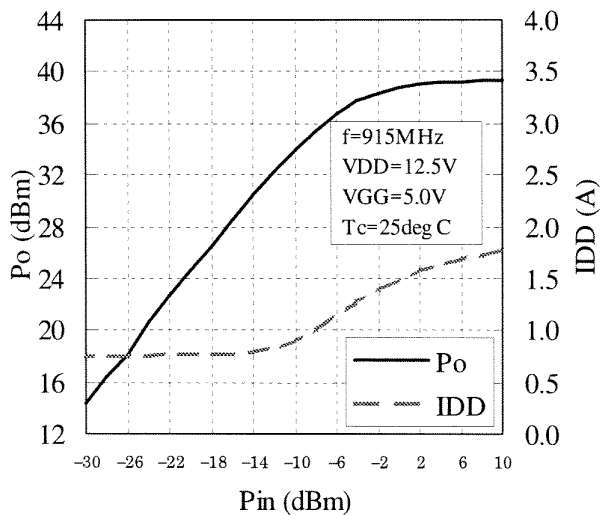
Po, IDD vs. Pin (860MHz)



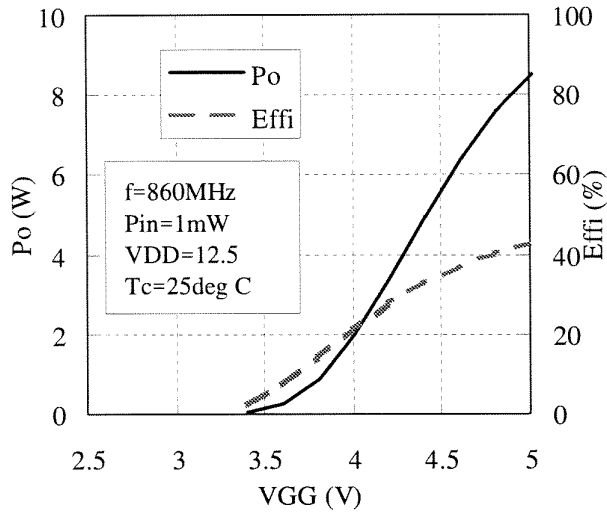
Po, IDD vs. Pin (890MHz)



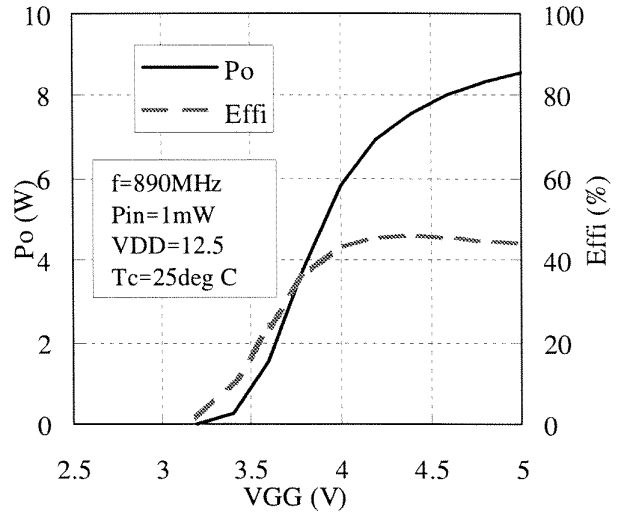
Po, IDD vs. Pin (915MHz)



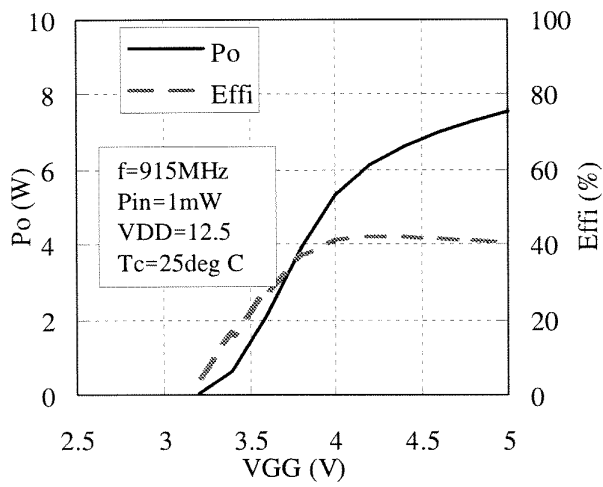
Po, Effi vs. VGG (860MHz)



Po, Effi vs. VGG (890MHz)



Po, Effi vs. VGG (915MHz)



Po vs. VDD

