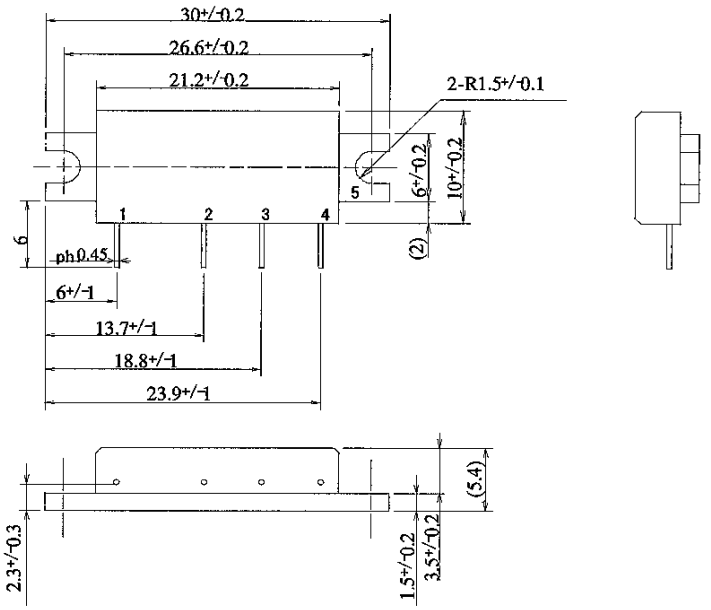
ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELETROSTATIC
SENSITIVE
DEVICES

MITSUBISHI RF POWER MODULE

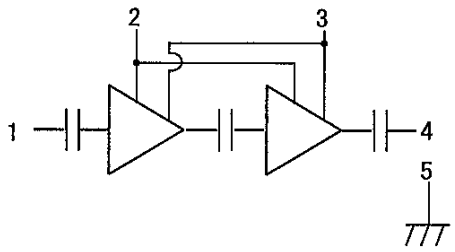
M68779M

Silicon MOS FET Power Amplifier, 218-250MHz 7.0W FM PORTABLE

OUTLINE DRAWING Dimensions in



BLOCK DIAGRAM



PIN:
1. Pin :RF INPUT
2. VGG :GATE BIAS SUPPLY
3. VDD :DRAIN BIAS SUPPLY
4. Po :RF OUTPUT
5. GND :FIN

MAXIMUM RATINGS (Tc=25deg.C UNLESS OTHERWISE NOTED)

SYMBOL	PARAMETER	CONDITIONS	RATINGS	UNIT
VDD	SUPPLY VOLTAGE	VGG<3.5V,Zg=Zl=50ohm	9.2	V
VGG	GATE BIAS VOLTAGE		4	V
Pin	INPUT POWER	f=218-250MHz,Zg=Zl=50ohm	50	mW
Po	OUTPUT POWER	f=218-250MHz,Zg=Zl=50ohm	10	W
Tc(OP)	OPERATION CASE TEMPERATURE	f=218-250MHz,Zg=Zl=50ohm	-30 to +100	deg.C
Tstg	STORAGE TEMPERATURE		-40 to +110	deg.C

Note:Above parameters are guaranteed independently.

ELECTRICAL CHARACTERISTICS (Tc=25deg.C,Zg=Zl=50ohmUNLESS OTHERWISE NOTED)

SYMBOL	PARAMETER	CONDITIONS	LIMITS		UNIT
			MIN	MAX	
f	FREQUENCY RANGE		218	250	MHz
Po	OUTPUT POWER	Vdd=7.2V, Vgg=3.5V, Pin=30mW	7.0		W
Eta	TOTAL EFFICIENCY	Po=6.0W,(Vgg=adj.),	45		%
2fo	2nd HARMONIC	Pin=30mW,		-25	dBc
VSWR in	INPUT VSWR	Vdd=7.2V		5	-
	Stability	Zg=50ohm, Vdd=6/ 7.2/ 9.2V, LOAD VSWR < 4:1 Pin=20/ 30/ 50mW, Po<8W	No parasitic oscillation		
	LOAD VSWR TOLERANCE	Vdd=9.2V,Pin=30mW,Po=7.0W (Vgg ADJUST), ρ 1 =20:1	No degradation or destroy		-

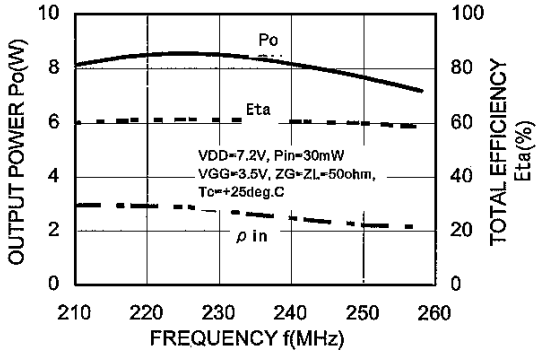
ABOVE PARAMETERS, RATINGS, LIMITS AND CONDITIONS ARE SUBJECT TO CHANGE .

Keep safety first in your circuit designs!

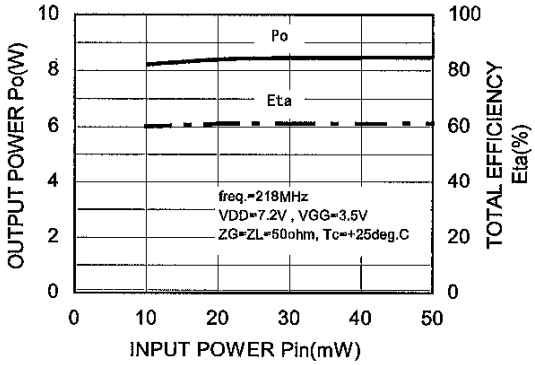
Mitsubishi Electric Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage. Remember to give due consideration 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.

TYPICAL PERFORMANCE DATA

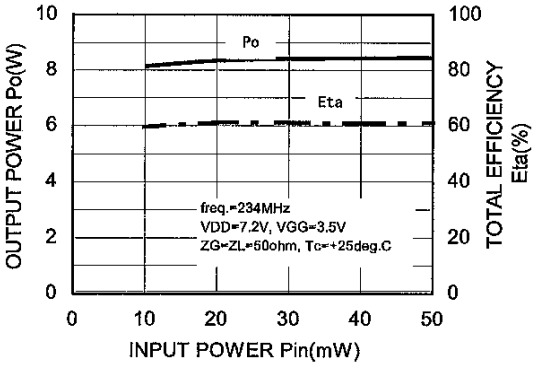
OUTPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY



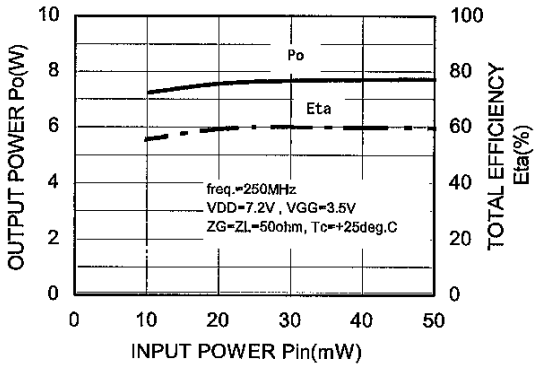
OUTPUT POWER, EFFICIENCY VS. INPUT POWER



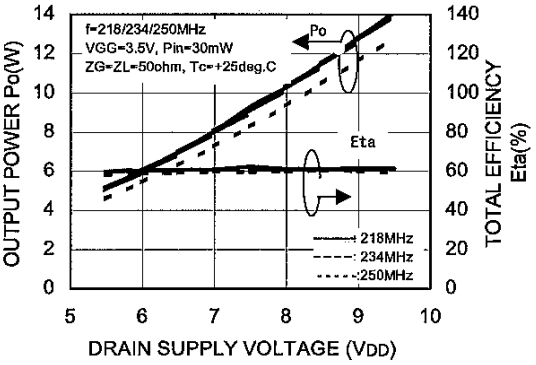
OUTPUT POWER, EFFICIENCY VS. INPUT POWER



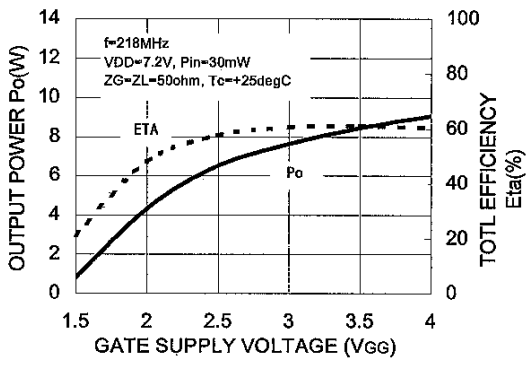
OUTPUT POWER, EFFICIENCY VS. INPUT POWER



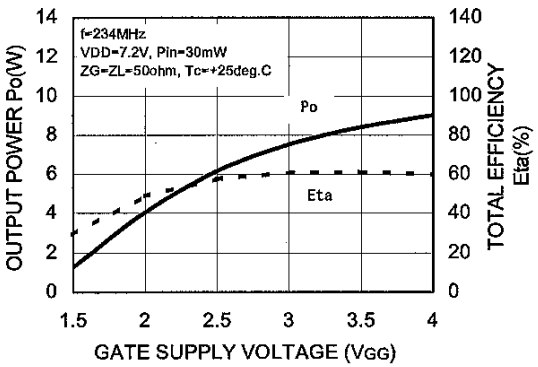
OUTPUT POWER, EFFICIENCY VS. DRAIN SUPPLY VOLTAGE



OUTPUT POWER, EFFICIENCY VS. GATE SUPPLY VOLTAGE



OUTPUT POWER, EFFICIENCY VS. GATE SUPPLY VOLTAGE



OUTPUT POWER, EFFICIENCY VS. GATE SUPPLY VOLTAGE