

RF EXPOSURE INFORMATION FOR MARINE RADIO

MRF75 & MRF55

1. FREQUENCY RANGE:

Please refer to attached table (Marine VHF Radio Frequencies Table)

2. RANGE OF OUTPUT POWER:

The TX power can adjustable from 0 to 25 watts.

3. MAXIMUM POWER:

The maximum power limited for 25 watts output.

4. DC VOLTAGES FINAL STAGE:

DC power supply for 13.8V on final stage TX module pin 3.

(attached RF power module specification for reference)

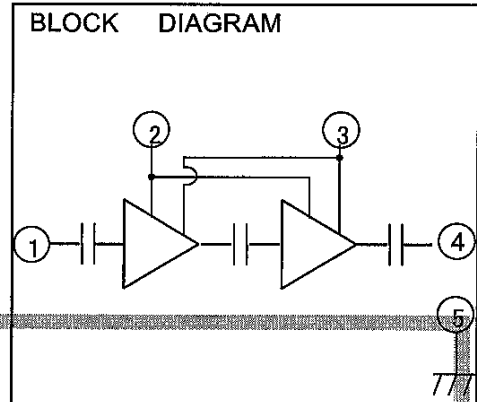
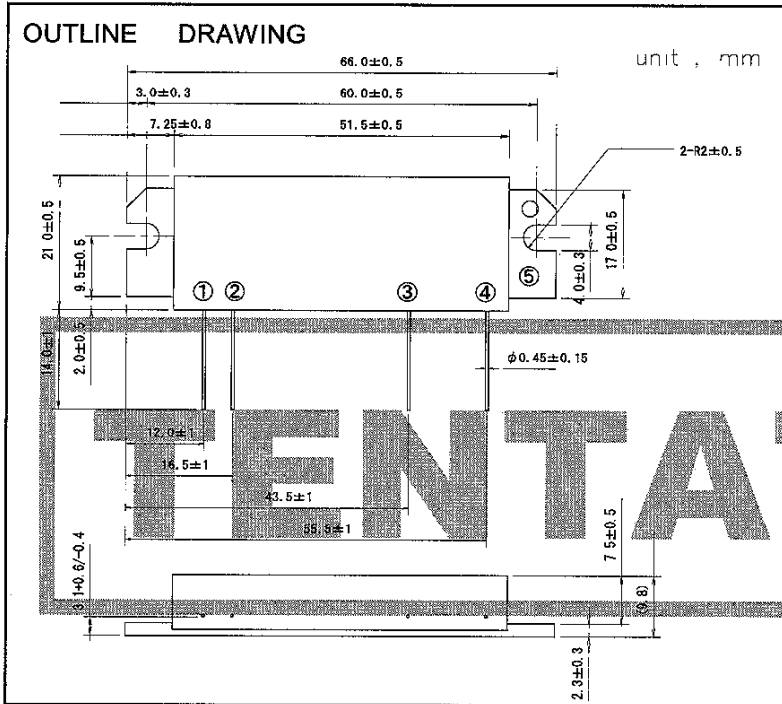
ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE
DEVICES

Revision date: 10th/Jan. '02

MITSUBISHI RF POWER MODULE

RA35H1516M

Silicon MOS FET Power Amplifier, 154-162MHz 35W MOBILE RADIO



- PIN**
- 1 Pin: RF INPUT
 - 2 V_{GG}: GATE BIAS SUPPLY
 - 3 V_{DD}: DRAIN BIAS SUPPLY
 - 4 P_o: RF OUTPUT
 - 5 GND: FIN

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

SYMBOL	PARAMETER	CONDITIONS	RATINGS	UNIT
V _{DD}	SUPPLY VOLTAGE	V _{GG} <5V, Z _g =Z _l =50ohm	17	V
V _{GG}	GATE BIAS VOLTAGE	V _{DD} <12.5V, P _{in} =0mW, Z _g =Z _l =50ohm	6	V
P _{in}	INPUT POWER	f=154-162MHz, Z _g =Z _l =50ohm	100	mW
P _o	OUTPUT POWER	f=154-162MHz, Z _g =Z _l =50ohm	40	W
T _{c(OP)}	OPERATION CASE TEMPERATURE	f=154-162MHz, Z _g =Z _l =50ohm	-30 to +110	deg.C
T _{stg}	STORAGE TEMPERATURE		-40 to +110	deg.C

Note: Above parameters are guaranteed independently.

ELECTRICAL CHARACTERISTICS (T_c=25deg.C, Z_g=Z_l=50ohm UNLESS OTHERWISE NOTED)

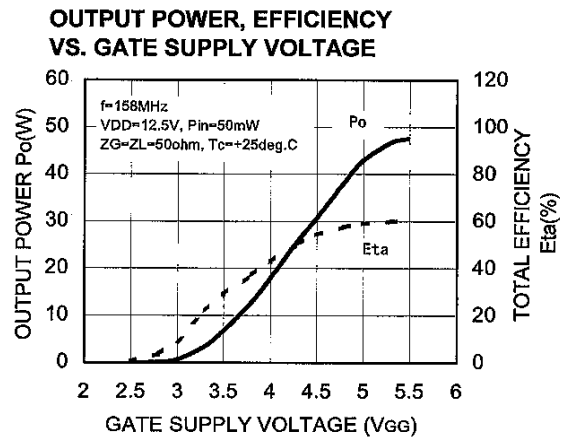
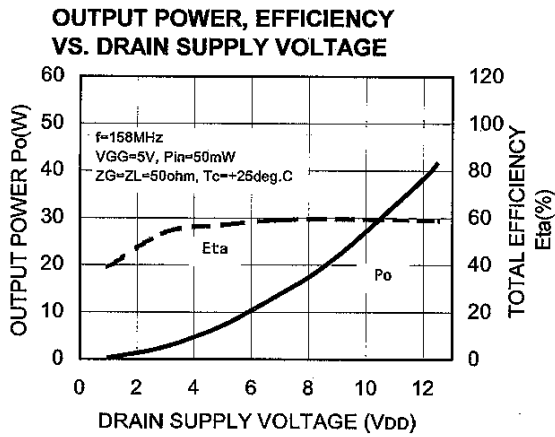
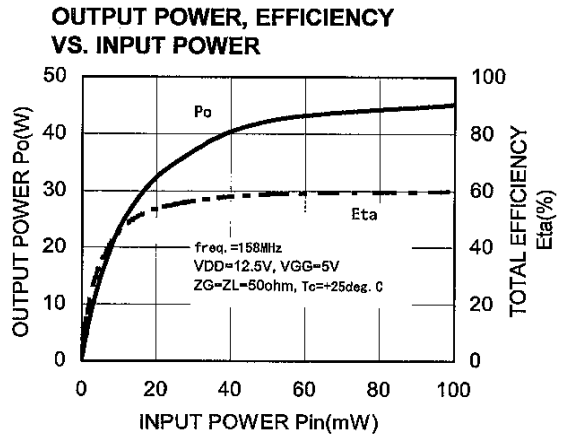
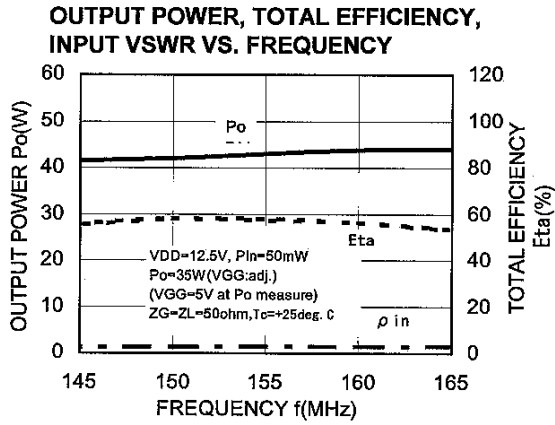
SYMBOL	PARAMETER	CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
f	FREQUENCY RANGE		154		162	MHz
P _o	OUTPUT POWER	V _{dd} =12.5V, V _{gg} =5V, P _{in} =50mW	35			W
E _t	TOTAL EFFICIENCY		47			%
2f _o	2nd HARMONIC				-40	dBc
VSWR _{in}	INPUT VSWR				3:1	-
	Stability	Z _g =50ohm, V _{dd} =10 - 15.2V, LOAD VSWR = 3:1, P _{in} =25 - 70mW, P _o <40W(V _{gg} Control)	No parasitic oscillation			
	LOAD VSWR TOLERANCE	V _{dd} =15.2V, P _{in} =50mW, P _o =35W(V _{gg} Control), Z _g =50ohm, 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.

TYPICAL PERFORMANCE DATA



TENTATIVE