

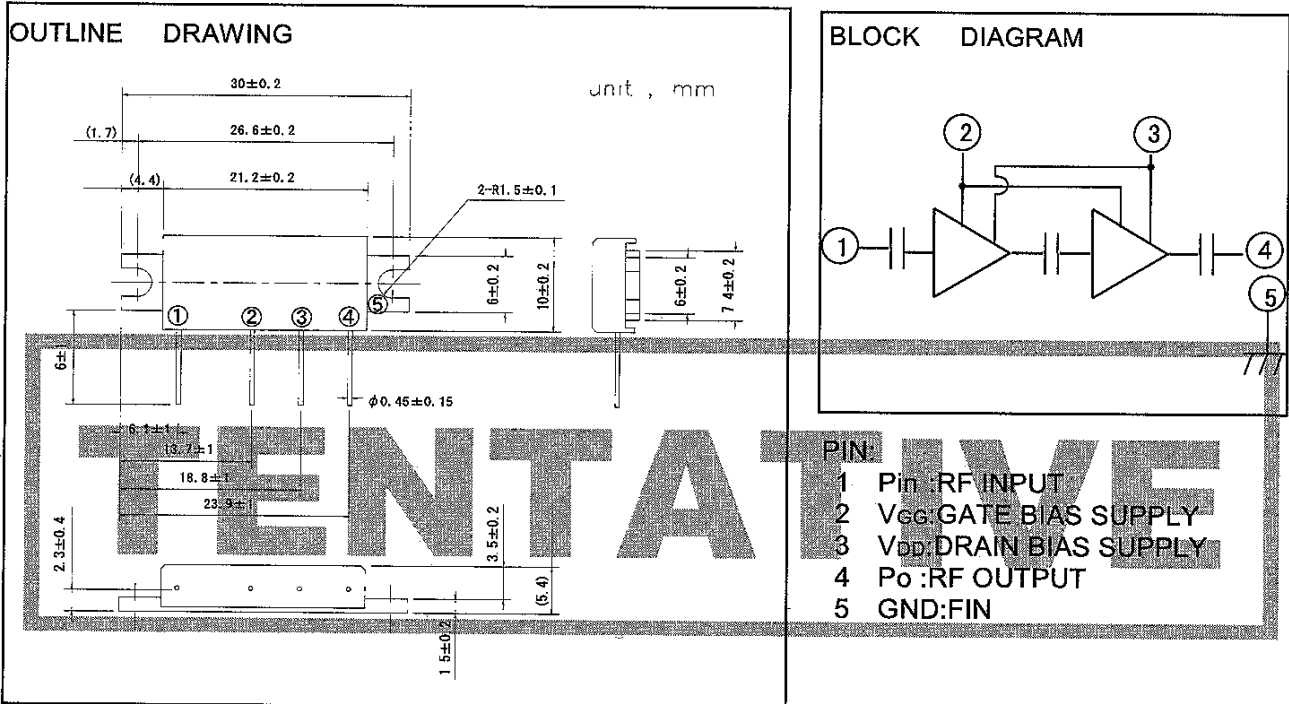
ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE
DEVICES

Revision date: 26th/Apr. '02

MITSUBISHI RF POWER MODULE

RA03M8087M

Silicon MOS FET Power Amplifier, 806-870MHz 3.6W PORTABLE RADIO



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

| SYMBOL | PARAMETER | CONDITIONS | RATINGS | UNIT |
|--------------------|-------------------------------|--|-------------|-------|
| V _{DD} | SUPPLY VOLTAGE | Z _g =Z _l =50ohm | 9.2 | V |
| V _{GG} | GATE BIAS VOLTAGE | V _{DD} <7.2V, P _{in} =0mW, Z _g =Z _l =50ohm | 4 | V |
| P _{in} | INPUT POWER | f=806-870MHz, Z _g =Z _l =50ohm | 70 | mW |
| P _o | OUTPUT POWER | f=806-870MHz, Z _g =Z _l =50ohm | 5 | W |
| T _{c(OP)} | OPERATION CASE TEMPERATURE | f=806-870MHz, 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 | | 806 | | 870 | MHz |
| P _o | OUTPUT POWER | V _{DD} =7.2V, V _{GG} =3.5V, P _{in} =50mW | 3.6 | | | W |
| E _t | TOTAL EFFICIENCY | P _o =3W(V _{GG} =adjust), V _{DD} =7.2V, P _{in} =50mW, | 32 | | | % |
| 2f _o | 2nd HARMONIC | | | | -30 | dBc |
| VSWR _{in} | INPUT VSWR | | | | 4 | - |
| | Stability | Z _g =50ohm, V _{DD} =4 – 9.2V, LOAD VSWR = 4:1, P _{in} =25 – 75mW, P _o <5W(V _{GG} Control) | No parasitic oscillation | | | |
| | LOAD VSWR TOLERANCE | V _{DD} =9.2V, P _{in} =50mW, P _o =3.6W(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.