

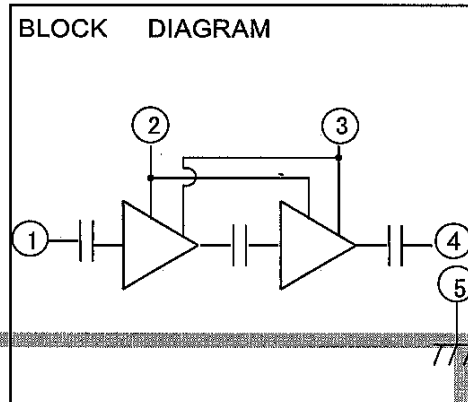
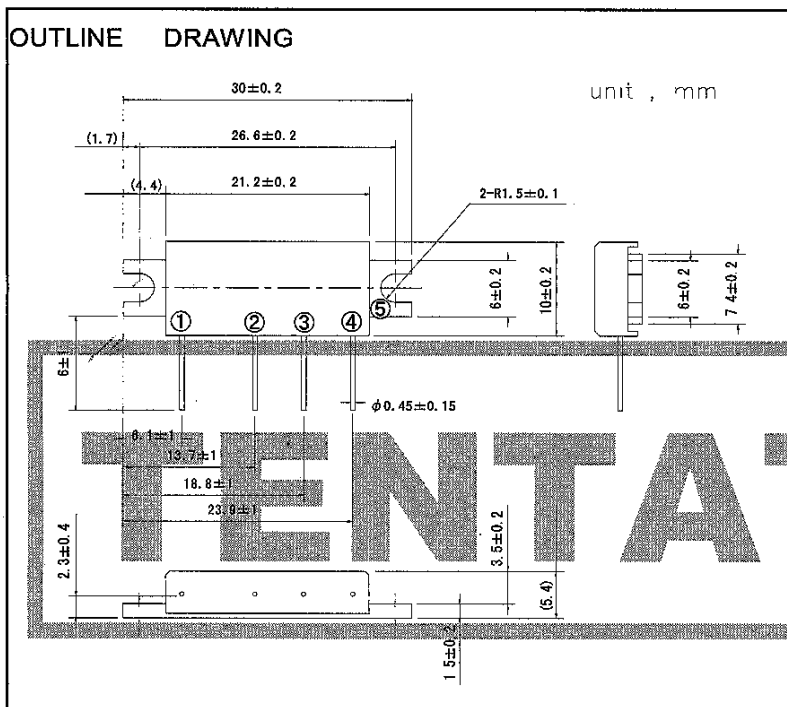
ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE
DEVICES

5th/Feb. '02

MITSUBISHI RF POWER MODULE

RA08N1317M

Silicon MOS FET Power Amplifier, 135-175MHz 8W PORTABLE RADIO



PIN:

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

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

SYMBOL	PARAMETER	CONDITIONS	RATINGS	UNIT
V _{DD}	SUPPLY VOLTAGE	Z _g =Z _l =50ohm	16	V
V _{GG}	GATE BIAS VOLTAGE	V _{DD} <9.6V, Pin=0mW, Z _g =Z _l =50ohm	3.5	V
P _{in}	INPUT POWER	f=135-175MHz, Z _g =Z _l =50ohm	30	mW
P _o	OUTPUT POWER	f=135-175MHz, Z _g =Z _l =50ohm	10	W
T _{c(OP)}	OPERATION CASE TEMPERATURE	f=135-175MHz, 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		135		175	MHz
P _o	OUTPUT POWER	V _{DD} =9.6V, V _{GG} =3.5V, Pin=20mW	8.0	8.5		W
E _t	TOTAL EFFICIENCY	P _o =8W(V _{GG} =adjust), V _{DD} =9.6V, Pin=20mW,	50	55		%
2f _o	2nd HARMONIC			-30	-25	dBc
VSWR _{in}	INPUT VSWR			2.5	4	-
	Stability	Z _g =50ohm, V _{DD} =4.8 - 15.0V, LOAD VSWR = 4:1, Pin=10 - 30mW, P _o <9W(V _{GG} Control)	No parasitic oscillation			
	LOAD VSWR TOLERANCE	V _{DD} =13.2V, Pin=20mW, P _o =8.0W(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.