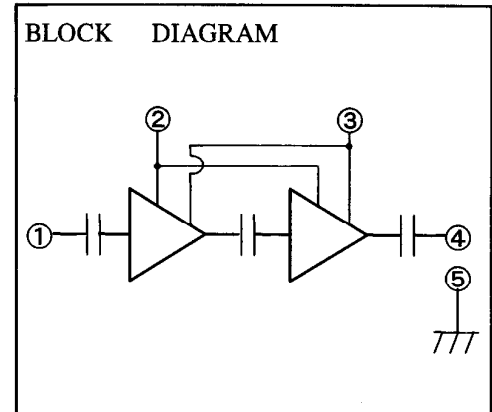
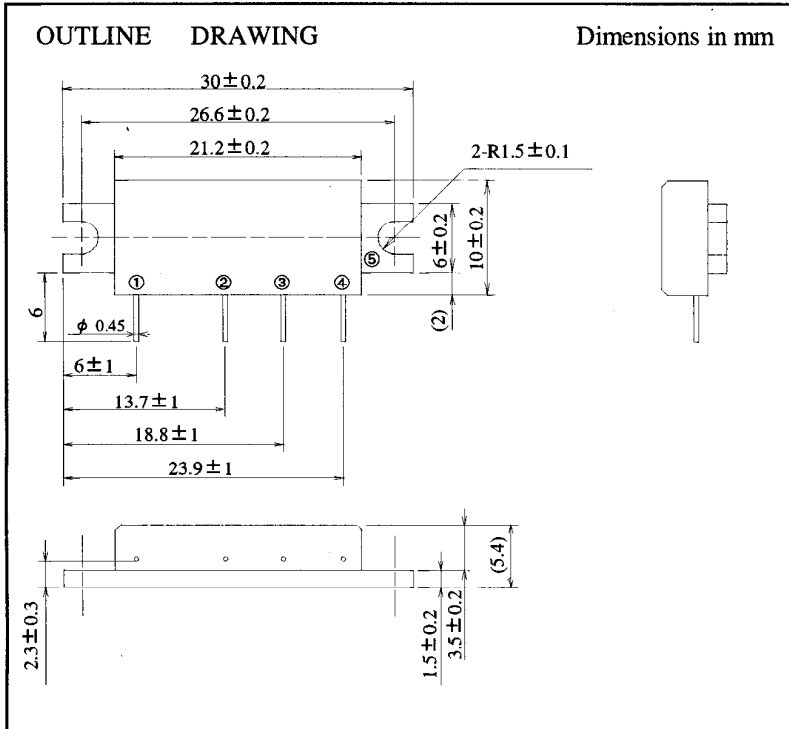


**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
SENSITIVE  
DEVICES

MITSUBISHI RF POWER MODULE

**M68776**

Silicon MOS FET Power Amplifier, 135-175MHz 6.5W FM PORTABLE



- PIN:**
- ① Pin :RF INPUT
  - ② V<sub>GG</sub> :GATE BIAS SUPPLY
  - ③ V<sub>DD</sub> :DRAIN BIAS SUPPLY
  - ④ P<sub>o</sub> :RF OUTPUT
  - ⑤ GND :FIN

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

SYMBOL	PARAMETER	CONDITIONS	RATINGS	UNIT
V <sub>DD</sub>	SUPPLY VOLTAGE	V <sub>GG</sub> ≤ 3.5V, Z <sub>g</sub> =Z <sub>l</sub> =50Ω	9.2	V
V <sub>GG</sub>	GATE BIAS VOLTAGE		4	V
P <sub>in</sub>	INPUT POWER	f=135-175MHz, Z <sub>g</sub> =Z <sub>l</sub> =50Ω	30	mW
P <sub>o</sub>	OUTPUT POWER	f=135-175MHz, Z <sub>g</sub> =Z <sub>l</sub> =50Ω	10	W
T <sub>c(OP)</sub>	OPERATION CASE TEMPERATURE	f=135-175MHz, Z <sub>g</sub> =Z <sub>l</sub> =50Ω	-30 to +100	°C
T <sub>stg</sub>	STORAGE TEMPERATURE		-40 to +110	°C

Note: Above parameters are guaranteed independently.

**ELECTRICAL CHARACTERISTICS** (T<sub>c</sub>=25°C, Z<sub>g</sub>=Z<sub>l</sub>=50Ω UNLESS OTHERWISE NOTED)

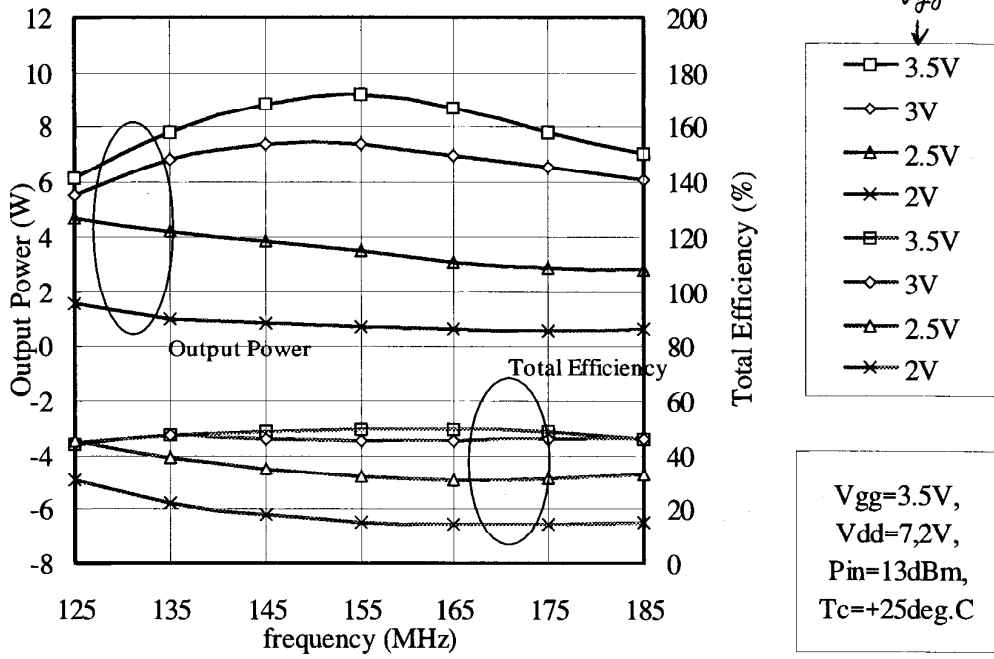
SYMBOL	PARAMETER	CONDITIONS	LIMITS		UNIT
			MIN	MAX	
f	FREQUENCY RANGE		135	175	MHz
P <sub>o</sub>	OUTPUT POWER	V <sub>dd</sub> =7.2V, V <sub>gg</sub> =3.5V, P <sub>in</sub> =20mW	6.5		W
η <sub>t</sub>	TOTAL EFFICIENCY		40		%
2f <sub>o</sub>	2nd HARMONIC			-25	dBc
ρ <sub>in</sub>	INPUT VSWR			4	-
	Stability	Z <sub>g</sub> =50Ω, V <sub>dd</sub> =4-9.2V, LOAD VSWR < 4:1	No parasitic oscillation		
	LOAD VSWR TOLERANCE	V <sub>dd</sub> =9.2V, P <sub>in</sub> =20mW, P <sub>o</sub> =6.5W (V <sub>gg</sub> ADJUST), Z <sub>l</sub> =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.

**M68776 Output Power, Total Efficiency vs. freq.**



**M68776 Output Power, Total Efficiency vs. Gate Bias**

