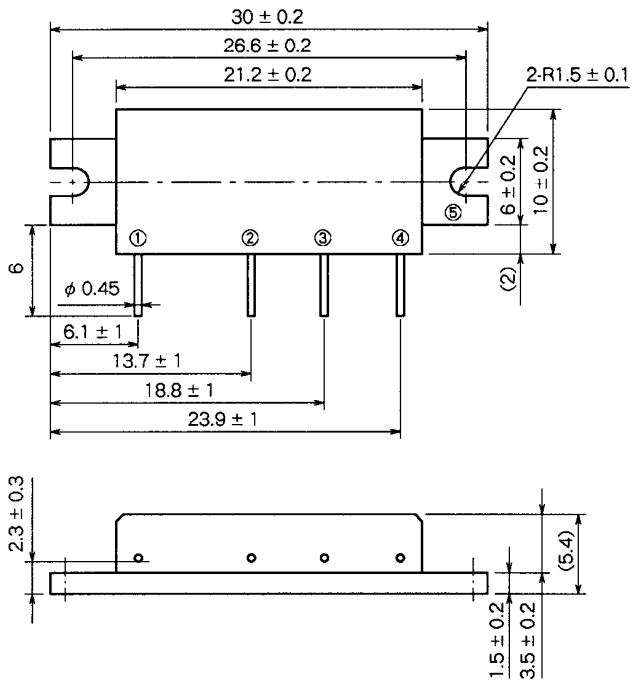
MITSUBISHI RF POWER MODULE

M68710UL

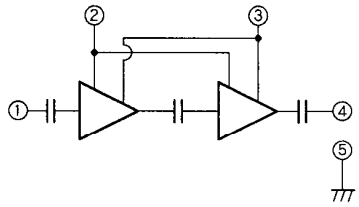
380-400MHz, 6V, 2W FM PORTABLE RADIO

OUTLINE DRAWING Dimensions in mm



H46

BLOCK DIAGRAM



PIN :
① P_{in} : RF INPUT
② V_{GG} : GATE BIAS SUPPLY
③ V_{DD} : DRAIN BIAS SUPPLY
④ P_O : RF OUTPUT
⑤ GND : FIN

ABSOLUTE MAXIMUM RATINGS (T_C = 25℃ unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
V_{DD}	Supply voltage	$V_{GG} \leqq 3.5V$, $Z_G = Z_L = 50\Omega$	9	V
V_{GG}	Gate bias voltage		4	V
P_{in}	Input power	f=380 to 400MHz, $Z_G = Z_L = 50\Omega$	30	mW
P_O	Output power	f=380 to 400MHz, $V_{DD} \leqq 9V$, $Z_G = Z_L = 50\Omega$	3	W
$T_{C(OP)}$	Operation case temperature	f=380 to 400MHz, $V_{DD} \leqq 9V$, $Z_G = Z_L = 50\Omega$	− 30 to 110	℃
T_{stg}	Storage temperature		− 40 to 110	℃

Note : Above parameters are guaranteed independently.

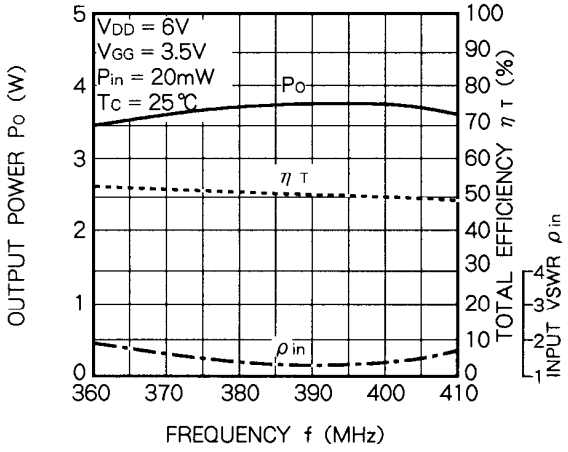
ELECTRICAL CHARACTERISTICS (T_C = 25℃, $Z_G = Z_L = 50\Omega$, unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		380	400	MHz
P_O	Output power	V_{DD} = 6V V_{GG} = 3.5V P_{in} = 20mW	2		W
η_T	Total efficiency		40		%
2fo	2nd. harmonic			− 25	dBc
ρ_{in}	Input VSWR			4	−
−	Stability	$Z_G = 50\Omega$, V_{DD} = 4 to 8V, Load VSWR < 4 : 1	No parasitic oscillation		−
−	Load VSWR tolerance	V_{DD} = 9V, P_{in} = 20mW, P_O = 2W(V_{GG} Adjust), Z_L = 20 : 1	No degradation or destroy		−

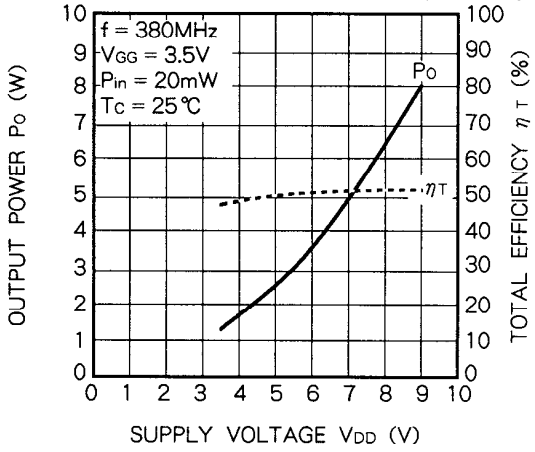
Note : Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

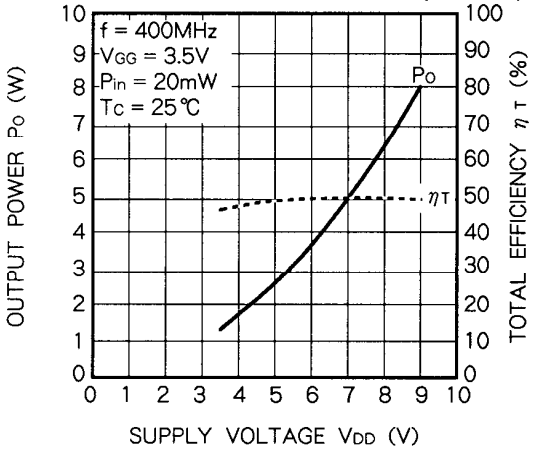
OUTPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY CHARACTERISTICS (TYPICAL)



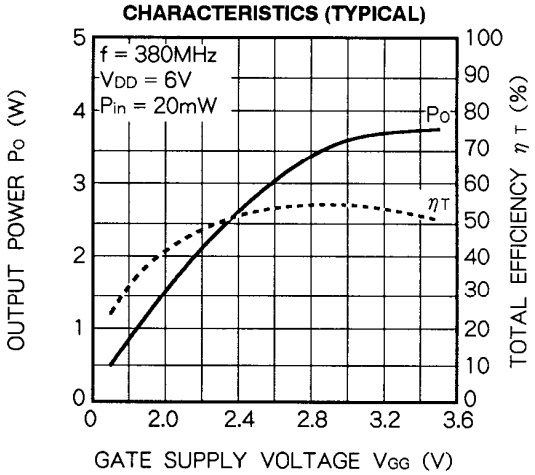
OUTPUT POWER, TOTAL EFFICIENCY VS. SUPPLY VOLTAGE CHARACTERISTICS (TYPICAL)



OUTPUT POWER, TOTAL EFFICIENCY VS. SUPPLY VOLTAGE CHARACTERISTICS (TYPICAL)



OUTPUT POWER, TOTAL EFFICIENCY VS. GATE SUPPLY VOLTAGE CHARACTERISTICS (TYPICAL)



OUTPUT POWER, TOTAL EFFICIENCY VS. GATE SUPPLY VOLTAGE CHARACTERISTICS (TYPICAL)

