



Island Labs

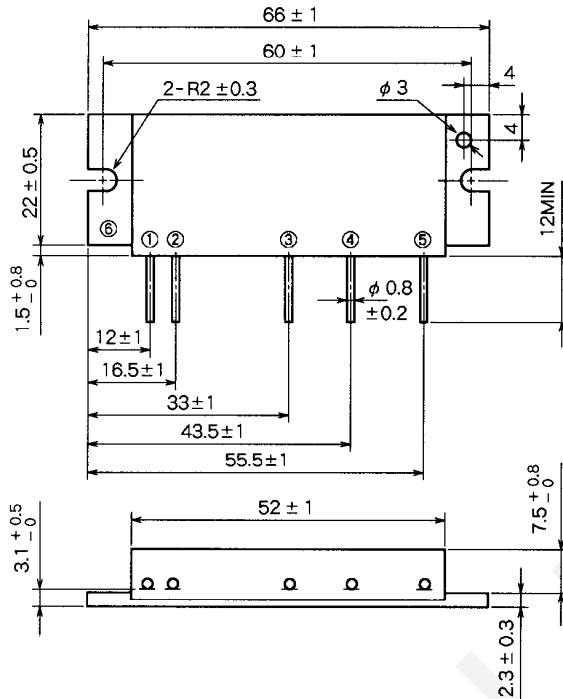
MITSUBISHI RF POWER MODULE

M57788L

400-430MHz, 12.5V, 40W, FM MOBILE RADIO

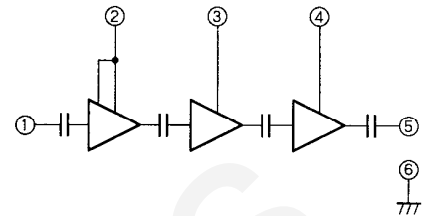
OUTLINE DRAWING

Dimensions in mm



H3

BLOCK DIAGRAM



PIN :

- ① Pin : RF INPUT
- ② Vcc1 : 1st. DC SUPPLY
- ③ Vcc2 : 2nd. DC SUPPLY
- ④ Vcc3 : 3rd. DC SUPPLY
- ⑤ Po : RF OUTPUT
- ⑥ GND : FIN

ABSOLUTE MAXIMUM RATINGS (T_c = 25°C unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
V _{cc1}	Supply voltage		16	V
V _{cc2,3}			17	V
I _{cc}	Total current		12	A
P _{in(max)}	Input power	Z _G = Z _L = 50 Ω	0.5	W
P _{o(max)}	Output power	Z _G = Z _L = 50 Ω	50	W
T _{c(OP)}	Operation case temperature		- 30 to 110	°C
T _{stg}	Storage temperature		- 40 to 110	°C

Note. Above parameters are guaranteed independently.

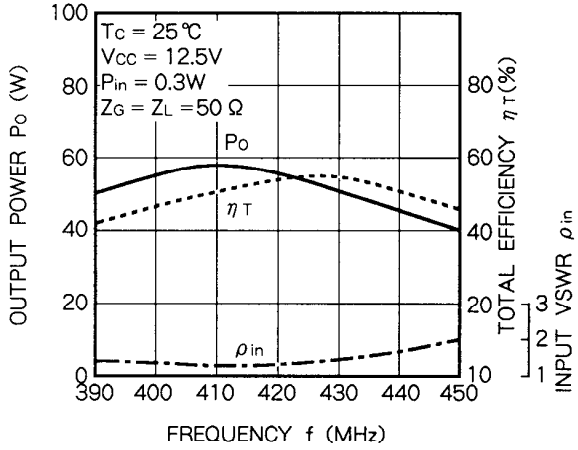
ELECTRICAL CHARACTERISTICS (T_c = 25°C unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range	P _{in} = 0.3W V _{cc} = 12.5V Z _G = Z _L = 50 Ω	400	430	MHz
P _o	Output power		40		W
η _T	Total efficiency		40		%
2f _o	2nd. harmonic			- 30	dBc
3f _o	3rd. harmonic			- 30	dBc
ρ _{in}	Input VSWR			3.5	-
-	Load VSWR tolerance	V _{cc} = 15.2V, P _o = 40W (P _{in} : controlled) Load VSWR = 8.8 : 1 (All phase) Z _G = 50 Ω	No degradation or destroy		-

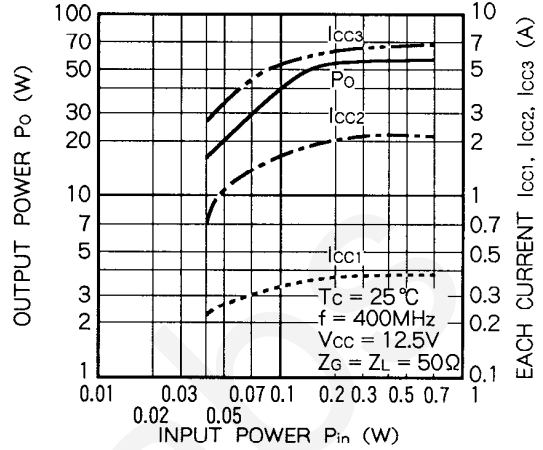
Note. Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

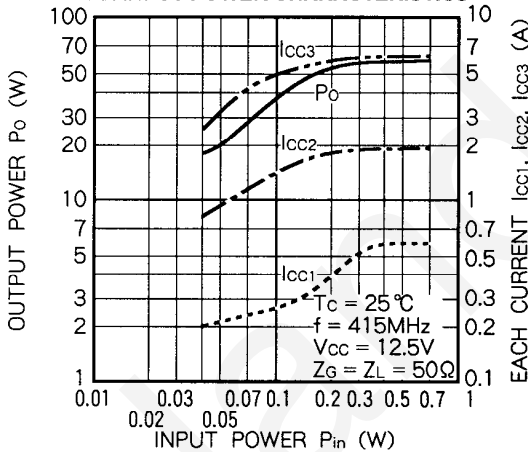
OUTPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY CHARACTERISTICS



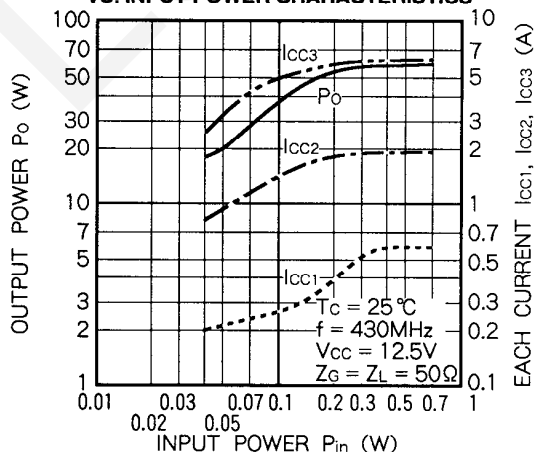
OUTPUT POWER, EACH CURRENT VS. INPUT POWER CHARACTERISTICS



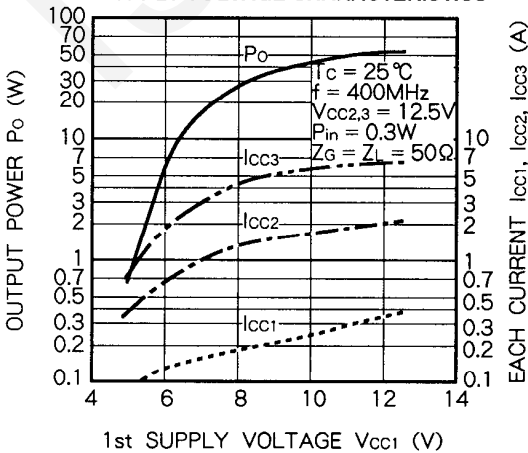
OUTPUT POWER, EACH CURRENT VS. INPUT POWER CHARACTERISTICS



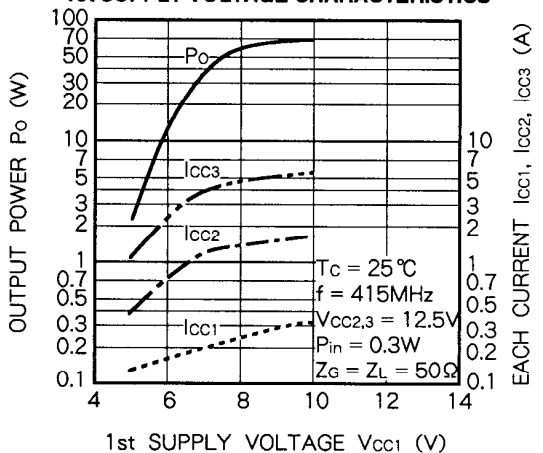
OUTPUT POWER, EACH CURRENT VS. INPUT POWER CHARACTERISTICS



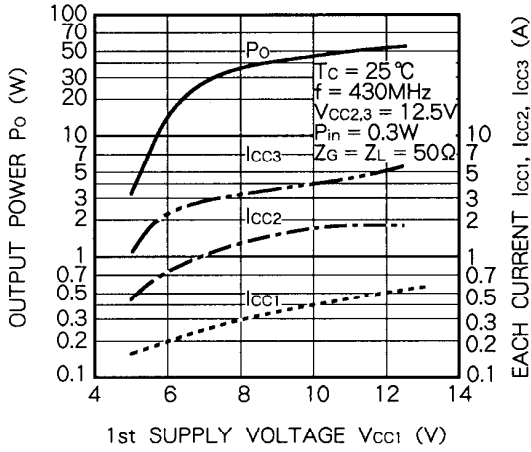
OUTPUT POWER, EACH CURRENT VS. 1st SUPPLY VOLTAGE CHARACTERISTICS



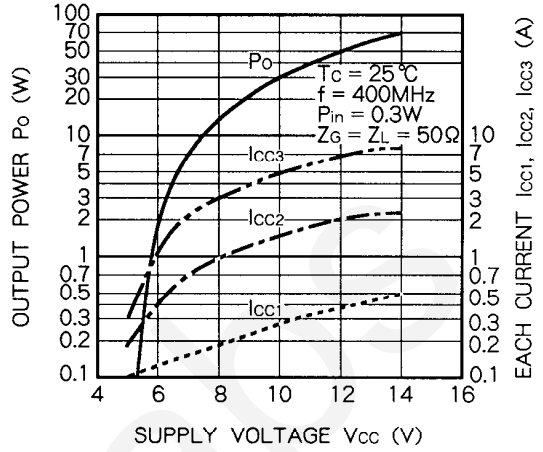
OUTPUT POWER, EACH CURRENT VS. 1st SUPPLY VOLTAGE CHARACTERISTICS



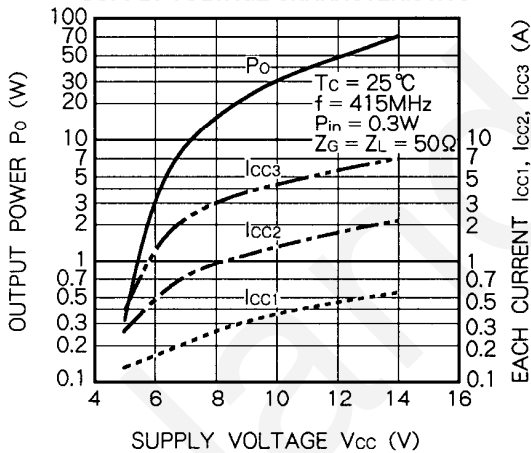
OUTPUT POWER, EACH CURRENT VS. 1st SUPPLY VOLTAGE CHARACTERISTICS



OUTPUT POWER, EACH CURRENT VS. SUPPLY VOLTAGE CHARACTERISTICS



OUTPUT POWER, EACH CURRENT VS. SUPPLY VOLTAGE CHARACTERISTICS



OUTPUT POWER, EACH CURRENT VS. SUPPLY VOLTAGE CHARACTERISTICS

