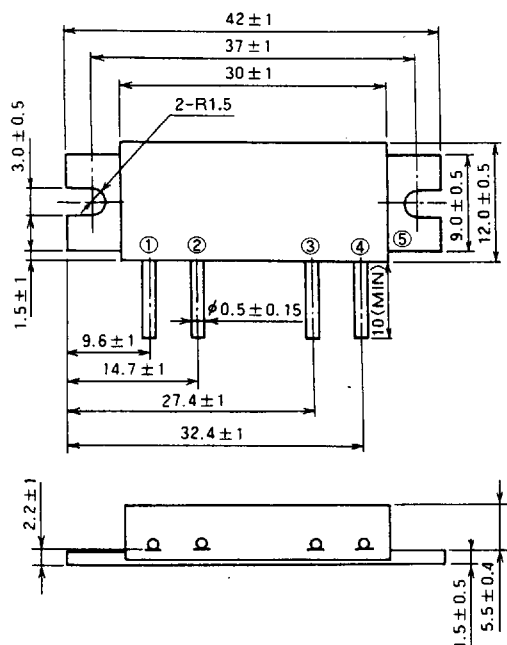


M57796MA

144-148MHz, 12.5V, 7W, FM PORTABLE RADIO

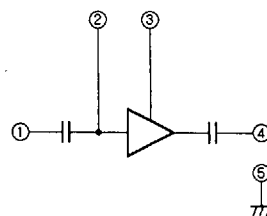
OUTLINE DRAWING

Dimensions in mm



H14

BLOCK DIAGRAM



PIN :

- ① Pin : RF INPUT
- ② V_{BB} : BASE BIAS SUPPLY
- ③ V_{CC} : DC SUPPLY
- ④ P_o : RF OUTPUT
- ⑤ GND : FIN

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

Symbol	Parameter	Conditions	Ratings	Unit
V _{CC}	Supply voltage		16	V
V _{BB}	Base bias		6	V
I _{CC}	Total current		3	A
P _{in(max)}	Input power	V _{CC1} = 12.5V, Z _G = Z _L = 50 Ω	400	mW
P _{o(max)}	Output power	Z _G = Z _L = 50 Ω	10	W
T _{c(OP)}	Operation case temperature		- 30 to 110	°C
T _{stg}	Storage temperature		- 40 to 110	°C

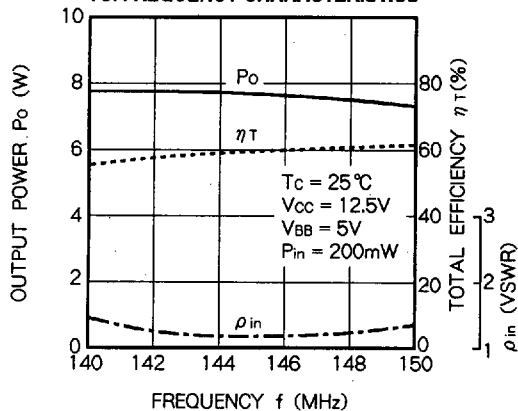
Note. Above parameters are guaranteed independently.

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

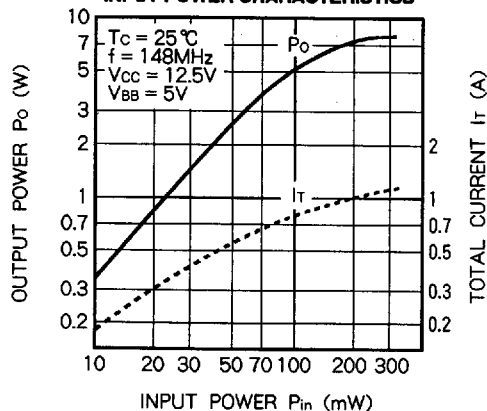
Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		144	148	MHz
P _o	Output power	V _{CC1} = V _{CC2} = 12.5V	7		W
η _T	Total efficiency	V _{BB} = 5V	50		%
2f _o	2nd. harmonic	P _{in} = 200mW		- 20	dBc
3f _o	3rd. harmonic	Z _G = Z _L = 50 Ω		- 30	dBc
ρ _{in}	Input VSWR			2.5	-
-	Load VSWR tolerance	V _{CC1} = V _{CC2} = 13.2V, V _{BB} = 5V P _o = 7W (P _{in} : controlled) Load VSWR ≥ 20 : 1 (All phase) Z _G = 50Ω	No degradation or destroy		-

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

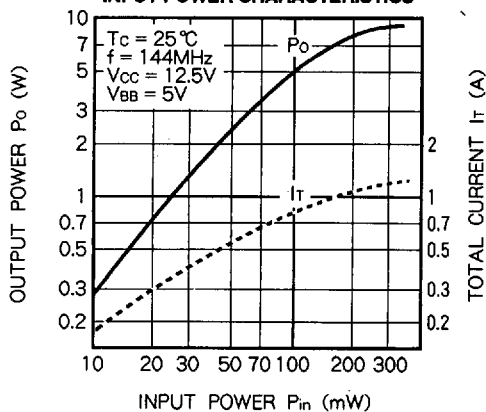
TYPICAL PERFORMANCE DATA

OUTPUT POWER, TOTAL EFFICIENCY, ρ_{in} VS. FREQUENCY CHARACTERISTICS


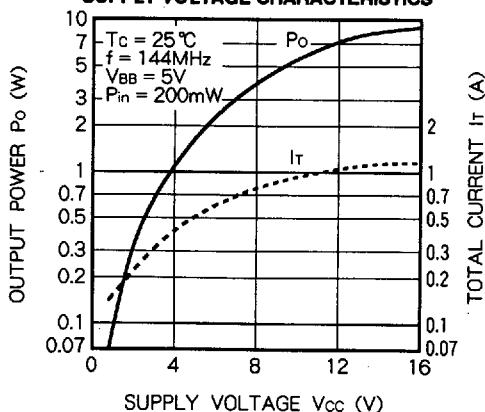
OUTPUT POWER, TOTAL CURRENT VS. INPUT POWER CHARACTERISTICS



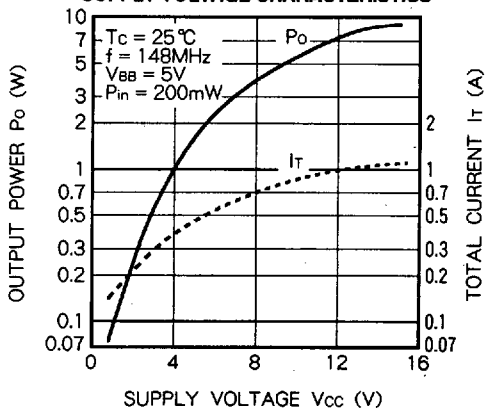
OUTPUT POWER, TOTAL CURRENT VS. INPUT POWER CHARACTERISTICS



OUTPUT POWER, TOTAL CURRENT VS. SUPPLY VOLTAGE CHARACTERISTICS



OUTPUT POWER, TOTAL CURRENT VS. SUPPLY VOLTAGE CHARACTERISTICS



OUTPUT POWER, 2nd, 3rd HARMONICS VS. FREQUENCY CHARACTERISTICS

