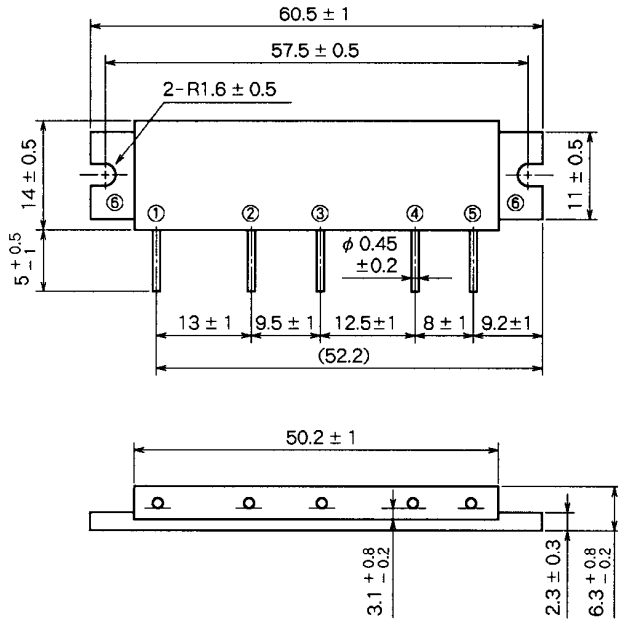


M67766B

820-851MHz, 12.5V, 6W, FM MOBILE RADIO

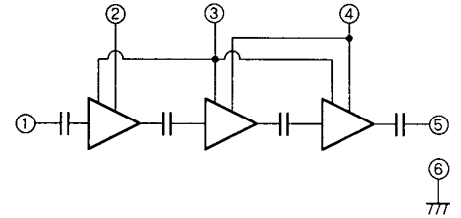
OUTLINE DRAWING

Dimensions in mm



H11

BLOCK DIAGRAM



PIN :

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

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

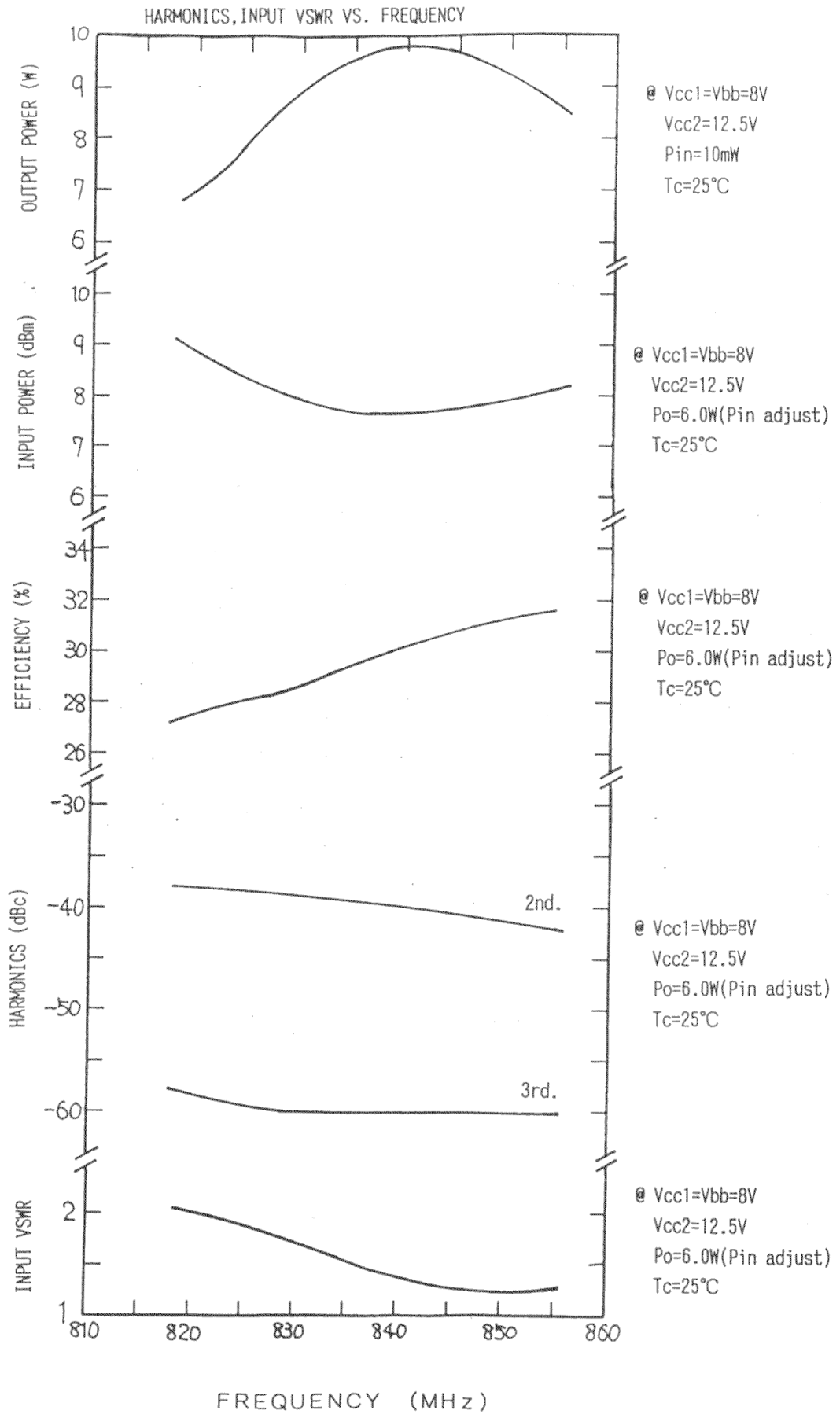
Symbol	Parameter	Conditions	Ratings	Unit
V _{CC1}	Supply voltage	V _{BB} = 8V, Z _G = Z _L = 50Ω	9	V
V _{CC2}		V _{BB} = 8V, Z _G = Z _L = 50Ω	17	V
V _{BB}	Base bias	V _{CC1} = 8V, V _{CC2} = 12.5V, Z _G = Z _L = 50Ω	9	V
I _{CC1}	DC current	Z _G = Z _L = 50Ω	300	mA
I _{BB}			400	mA
I _{CC2}			3	A
P _{IN(AVE)}	Input power	V _{CC2} = 12.5V, Z _G = Z _L = 50Ω	40	mW
P _{IN(PEAK)}			100	mW
P _{O(AVE)}	Output power	V _{CC2} = 12.5V, Z _G = Z _L = 50Ω	10	W
P _{O(PEAK)}			20	mW
T _{C(OP)}	Operation case temperature		- 30 to 100	°C
T _{stg}	Storage temperature		- 30 to 100	°C

Note. Above parameters are guaranteed independently.

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
P_o	Output power	$f=820$ to 851MHz , $P_{in}=10\text{dBm}$, $V_{CC1}=8\text{V}$, $V_{BB}=8\text{V}$, $V_{CC2}=12.5\text{V}$, $Z_G=Z_L=50\Omega$	6		W
P_{in}	Input power	$f = 824$ to 849MHz		10	dBm
η_T	Total efficiency	$P_o = 6\text{W}$ (P_{in} : controlled) $V_{CC1} = 8\text{V}$ $V_{BB} = 8\text{V}$	25		%
$2f_o$	2nd. harmonic	$V_{CC2} = 12.5\text{V}$ $Z_G = Z_L = 50\Omega$		- 30	dBc
$3f_o$	3rd. harmonic			- 30	dBc
ρ_{in}	Input VSWR			3	-
NP	Noise in receive band	$f = 824$ to 849MHz , $P_o = 6\text{W}$ (P_{in} : controlled), $V_{CC1} = 8\text{V}$ $V_{BB}=8\text{V}$, $V_{CC2}=12.5\text{V}$, $Z_G=Z_L=50\Omega$ $f_{RX} = f_{TX} + 45\text{MHz}$, $BW = 30\text{kHz}$		- 85	dBm
IMD3	3rd. IMD	$f = 824$ to 849MHz , $P_{O(AVE)} = 6\text{W}$ (P_{in} : controlled) $V_{CC1} = 8\text{V}$, $V_{BB} = 8\text{V}$, $V_{CC2} = 12.5\text{V}$ 2 tone, $\Delta f = 10\text{kHz}$, $Z_G=Z_L=50\Omega$		- 24	dBc
IMD5	5th. IMD			- 32	dBc
IMD7	7th. IMD			- 38	dBc
-	Load VSWR tolerance	$f = 824$ to 849MHz , $P_o = 6\text{W}$ (P_{in} : controlled) $V_{CC1} = 8\text{V}$, $V_{BB} = 8\text{V}$, $V_{CC2} = 15\text{V}$ Load VSWR < 6 : 1 (All phase)	No degradation or destroy		-

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



M67766B IMD3,5,7 vs. Po

f=849MHz, Vbb=Vcc1=8V, Vcc2=12.5V, Zg=Zl=50ohms, Tc=25deg.C

