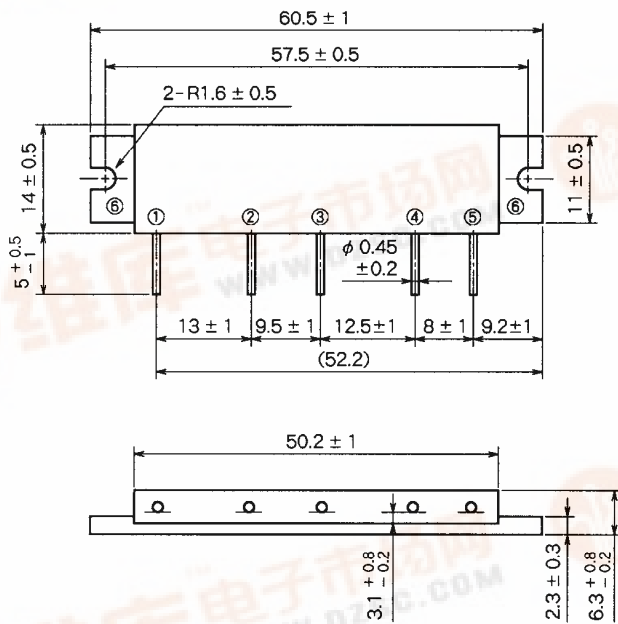


M67766B

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

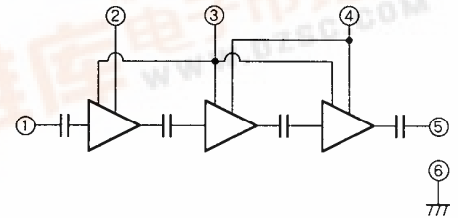
OUTLINE DRAWING

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 (Tc = 25°C unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
VCC1	Supply voltage	VBB = 8V, ZG = ZL = 50Ω	9	V
VCC2		VBB = 8V, ZG = ZL = 50Ω	17	V
VBB	Base bias	VCC1 = 8V, VCC2 = 12.5V, ZG = ZL = 50Ω	9	V
ICC1	DC current	ZG = ZL = 50Ω	300	mA
IBB			400	mA
ICC2			3	A
PIn(AVE)	Input power	VCC2 = 12.5V, ZG = ZL = 50Ω	40	mW
PIn(PEAK)			100	mW
PO(AVE)	Output power	VCC2 = 12.5V, ZG = ZL = 50Ω	10	W
PO(PEAK)			20	mW
TC(OP)	Operation case temperature		-30 to 100	°C
Tstg	Storage temperature		-30 to 100	°C

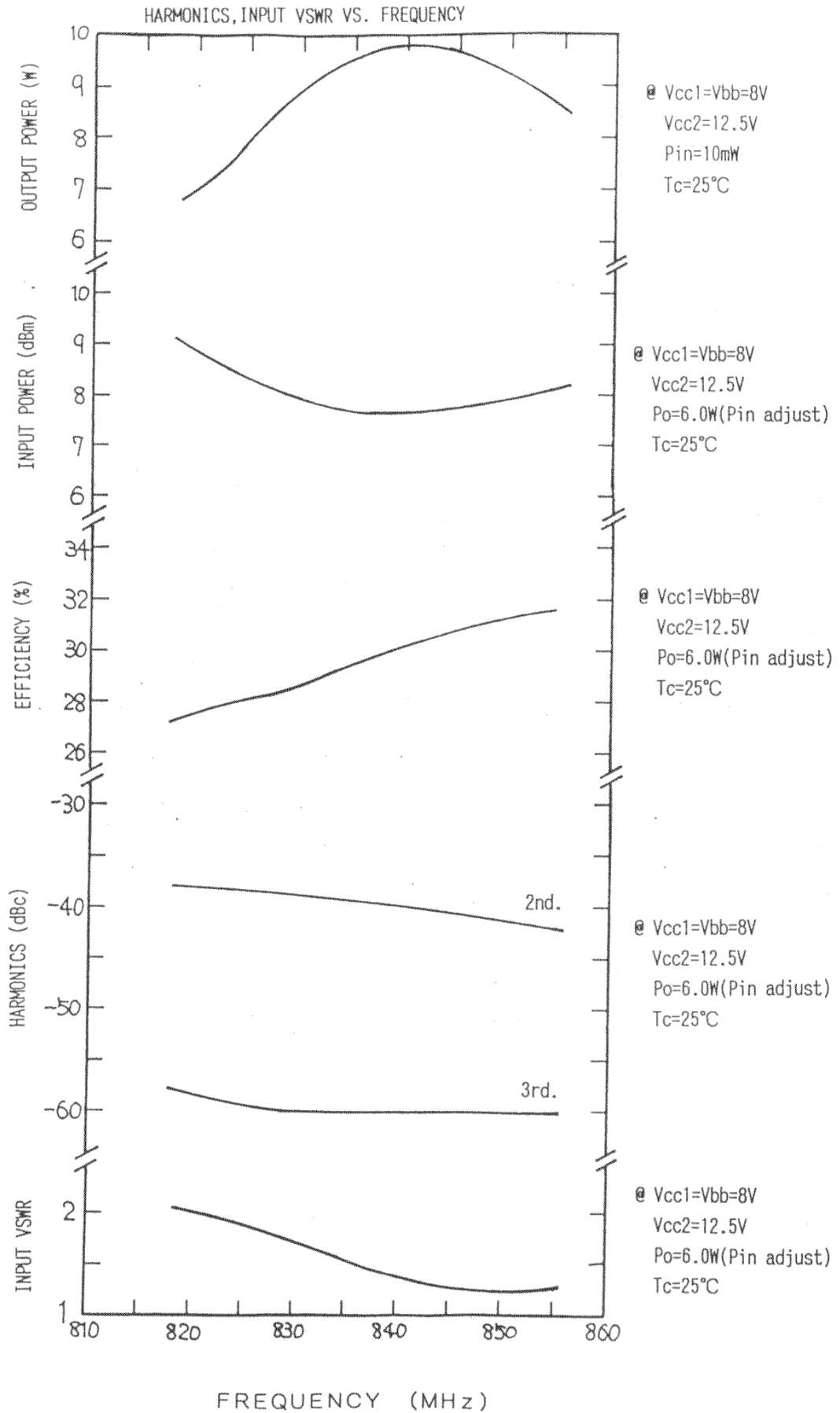
Note. Above parameters are guaranteed independently.

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} =10dBm, V _{cc1} =8V, V _{BB} =8V, V _{cc2} =12.5V, Z _G =Z _L =50Ω	6		W
P _{in}	Input power	f = 824 to 849MHz		10	dBm
η_T	Total efficiency	P _o = 6W (P _{in} : controlled)	25		%
2fo	2nd. harmonic	V _{cc1} = 8V V _{BB} = 8V		- 30	dBc
3fo	3rd. harmonic	V _{cc2} = 12.5V		- 30	dBc
ρ_{in}	Input VSWR	Z _G = Z _L = 50Ω		3	-
NP	Noise in receive band	f = 824 to 849MHz, P _o = 6W (P _{in} : controlled), V _{cc1} = 8V V _{BB} = 8V, V _{cc2} = 12.5V, Z _G = Z _L = 50Ω f _{RX} = f _{TX} + 45MHz, BW = 30kHz		- 85	dBm
IMD3	3rd. IMD	f = 824 to 849MHz,		- 24	dBc
IMD5	5th. IMD	P _{o(AVE)} = 6W (P _{in} : controlled)		- 32	dBc
IMD7	7th. IMD	V _{cc1} = 8V, V _{BB} = 8V, V _{cc2} = 12.5V 2 tone, $\Delta f = 10\text{kHz}$, Z _G =Z _L = 50Ω		- 38	dBc
-	Load VSWR tolerance	f = 824 to 849MHz, P _o = 6W (P _{in} : controlled) V _{cc1} = 8V, V _{BB} = 8V, V _{cc2} = 15V Load VSWR < 6 : 1 (All phase)	No degradation or destroy		-

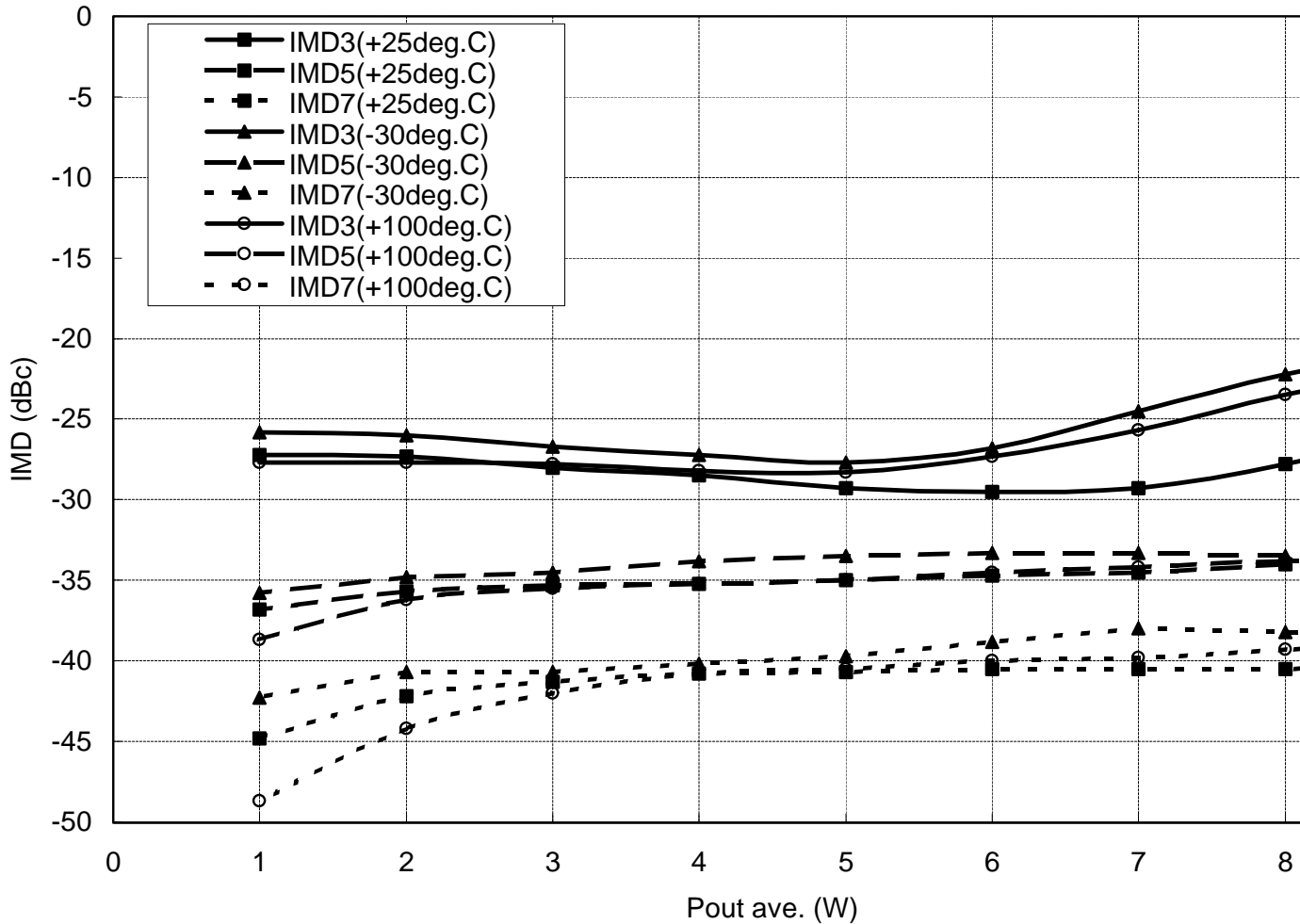
Note. Above parameters, ratings, limits and conditions are subject to change.

M67766B OUTPUT POWER, INPUT POWER, EFFICIENCY,



M67766B IMD3,5,7 vs. Po

f=824MHz, Vbb=Vcc1=8V, Vcc2=12.5V, Zg=Zl=50ohms, Tc=25deg.C



M67766B IMD3,5,7 vs. Po

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

