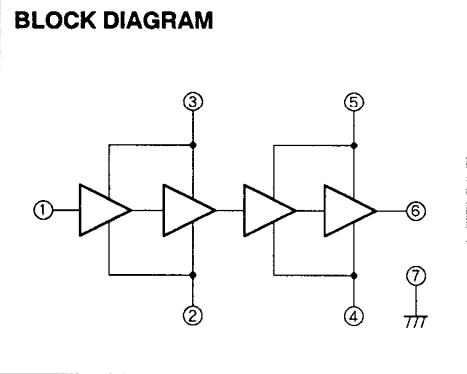
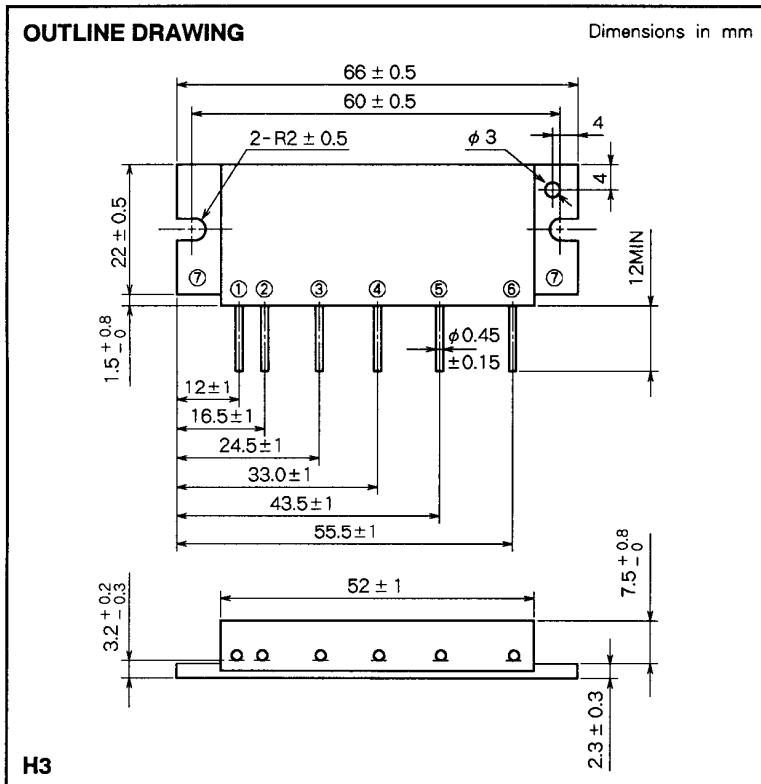


M67766A

824-849MHz, 12.5V, 6W, MOBILE RADIO



- PIN :
- ① Pin : RF INPUT
 - ② V_{BB1} : 1st. BASE BIAS SUPPLY
 - ③ V_{CC1} : 1st. COLLECTOR BIAS SUPPLY
 - ④ V_{BB2} : 2nd. BASE BIAS SUPPLY
 - ⑤ V_{CC2} : 2nd. COLLECTOR BIAS SUPPLY
 - ⑥ P_o : RF OUTPUT
 - ⑦ GND : FIN

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

Symbol	Parameter	Conditions	Ratings	Unit
V _{CC1}	1st. Collector bias supply voltage	Z _G = Z _L = 50 Ω, V _{BB1} = 8V	9	V
V _{CC2}	2nd. Collector bias supply voltage	Z _G = Z _L = 50 Ω, V _{BB2} = 8V	15.5	V
V _{BB1}	1st. Base bias supply voltage	Z _G = Z _L = 50 Ω, V _{CC1} = 8V	9	V
V _{BB2}	2nd. Base bias supply voltage	Z _G = Z _L = 50 Ω, V _{CC2} = 12.5V	9	V
I _{CC1}	1st. Collector DC current	Z _G = Z _L = 50 Ω	300	mA
I _{CC2}	2nd. Collector DC current	Z _G = Z _L = 50 Ω	2	A
I _{BB1}	1st. Base DC current	Z _G = Z _L = 50 Ω	200	mA
I _{BB2}	2nd. Base DC current	Z _G = Z _L = 50 Ω	300	mA
P _{i(av)}	Average input power	Z _G = Z _L = 50 Ω, V _{CC2} = 12.5V	4	mW
P _{i(pk)}	Peak input power	Z _G = Z _L = 50 Ω, V _{CC2} = 12.5V	10	mW
P _{o(av)}	Average output power	Z _G = Z _L = 50 Ω, V _{CC2} = 12.5V	10	W
P _{o(pk)}	Peak output power	Z _G = Z _L = 50 Ω, V _{CC2} = 12.5V	20	W
T _{c(OP)}	Operation case temperature	Z _G = Z _L = 50 Ω	- 30 to 100	°C
T _{stg}	Storage temperature		- 30 to 100	°C

Note. Above parameters are guaranteed independently.

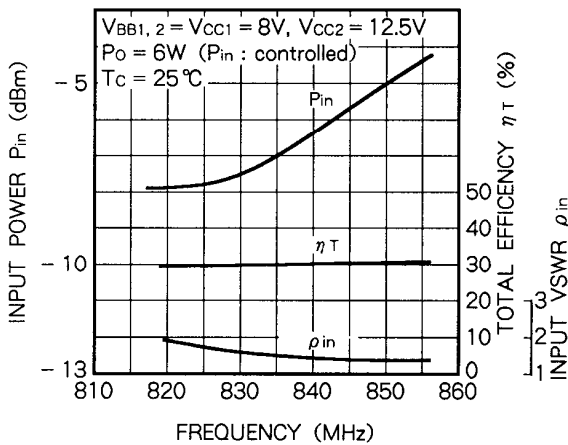
ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		824	849	MHz
$P_{o(pk)}$	Peak output power	$P_{i(pk)} = 2\text{mW}$, $V_{BB1} = V_{CC1} = V_{BB2} = 8\text{V}$, $V_{CC2} = 12.5\text{V}$, $Z_G = Z_L = 50\Omega$	12.5		W
$P_{i(av)}$	Average output power	$V_{BB1} = V_{CC1} = V_{BB2} = 8\text{V}$, $V_{CC2} = 12.5\text{V}$, $P_o = 6\text{W}$ (P_{in} : controlled) $Z_G = Z_L = 50\Omega$		1	mW
η_T	Total efficiency		20		%
2fo	2nd. harmonic			-30	dBc
3fo	3rd. harmonic			-30	dBc
VSWR _{in}	Input VSWR			3	-
IMD ₃	3rd. IMD	$V_{BB1} = V_{CC1} = V_{BB2} = 8\text{V}$, $V_{CC2} = 12.5\text{V}$, $P_{o(av)} = 6\text{W}$ (P_{in} : controlled), $\Delta f = 10\text{kHz}$, 2 tone, $Z_G = Z_L = 50\Omega$		-24	dBc
IMD ₅	5th. IMD			-32	dBc
IMD ₇	7th. IMD			-38	dBc
-	Load VSWR tolerance	$V_{BB1} = V_{CC1} = V_{BB2} = 8\text{V}$, $V_{CC2} = 15\text{V}$, $P_o = 6\text{W}$ (P_{in} : controlled) Load VSWR=6:1 (All phase), 2sec. $Z_G = 50\Omega$	No degradation in output power		-

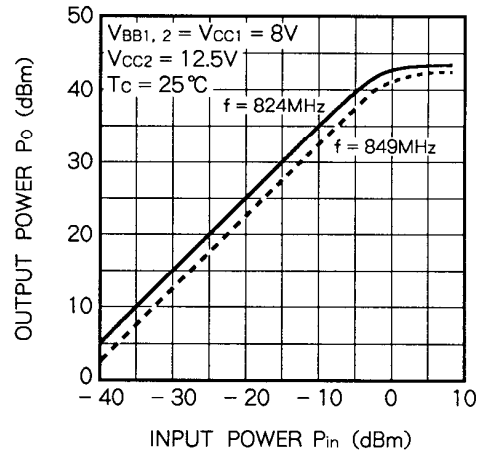
Note. Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

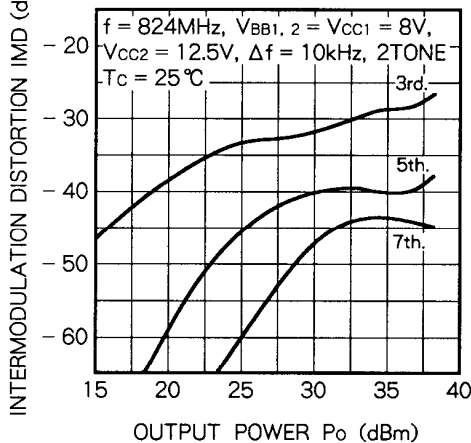
INPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY



OUTPUT POWER VS. INPUT POWER



INTERMODULATION DISTORTION VS. OUTPUT POWER



INTERMODULATION DISTORTION VS. OUTPUT POWER

