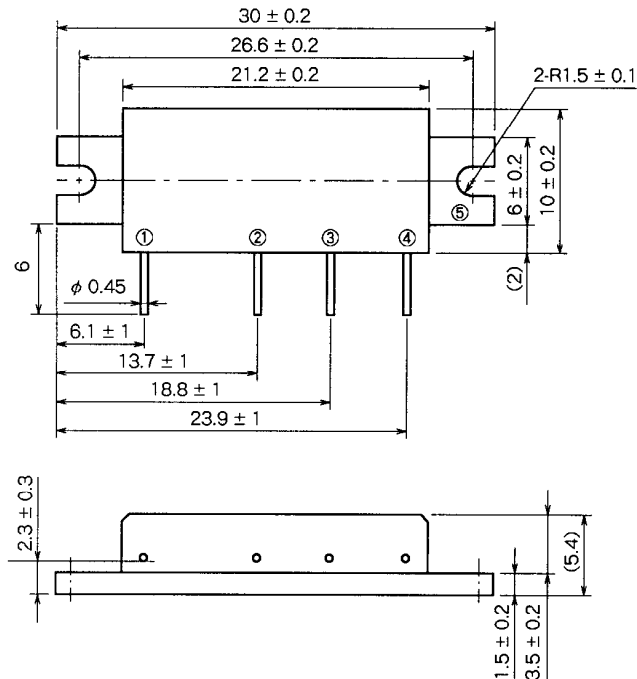
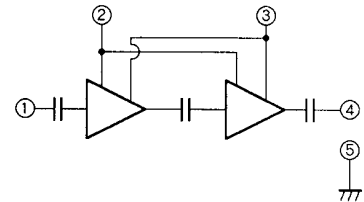


M67799HA

450-470MHz, 9.6V, 7.5W, FM PORTABLE RADIO

OUTLINE DRAWING

Dimensions in mm

**H46****BLOCK DIAGRAM**

PIN :

① P_{in} : RF INPUT② V_{GG} : GATE BIAS SUPPLY③ V_{DD} : DRAIN BIAS SUPPLY④ P_o : RF OUTPUT

⑤ GND : FIN

ABSOLUTE MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
V_{DD}	Supply voltage	$V_{GG} \leq 3.5\text{V}$, $Z_G = Z_L = 50\Omega$	16	V
V_{GG}	Gate bias voltage		4	V
P_{in}	Input power	$f = 450 \text{ to } 470\text{MHz}$, $Z_G = Z_L = 50\Omega$	30	mW
P_o	Output power	$f = 450 \text{ to } 470\text{MHz}$, $Z_G = Z_L = 50\Omega$	10	W
$T_{C(OP)}$	Operation case temperature	$f = 450 \text{ to } 470\text{MHz}$, $Z_G = Z_L = 50\Omega$	- 30 to 100	$^\circ\text{C}$
T_{stg}	Storage temperature		- 40 to 110	$^\circ\text{C}$

Note. Above parameters are guaranteed independently.

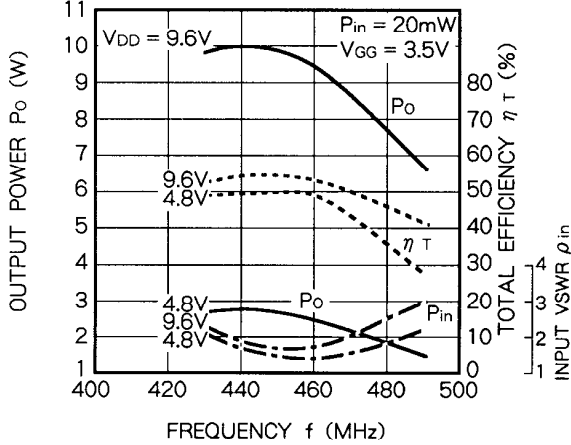
ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$, $Z_G = Z_L = 50\Omega$, unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		450	470	MHz
P_o	Output power		7.5		W
η_T	Total efficiency	$V_{DD} = 9.6\text{V}$	43		%
$2f_o$	2nd. harmonic	$V_{GG} = 3.5\text{V}$		- 25	dBc
$3f_o$	3rd. harmonic	$P_{in} = 20\text{mW}$		- 30	dBc
ρ_{in}	Input VSWR			4	-
-	Stability	$Z_G = 50\Omega$, $V_{DD} = 4.8 \text{ to } 13.2\text{V}$, Load VSWR < 4 : 1	No parasitic oscillation		-
-	Load VSWR tolerance	$V_{DD} = 13.2\text{V}$, $P_{in} = 20\text{mW}$, $P_o = 7.5\text{W}$ (V_{GG} Adjust), $Z_L = 20 : 1$	No degradation or destroy		-

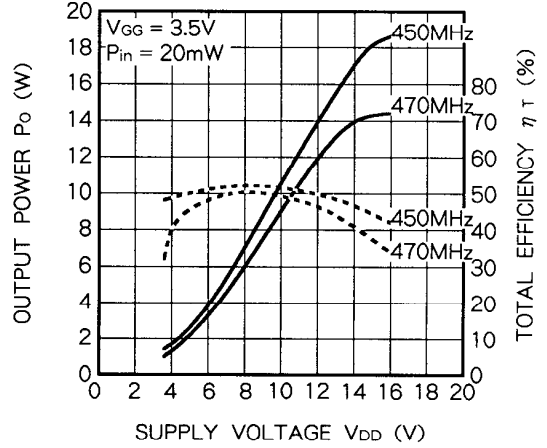
Note : Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

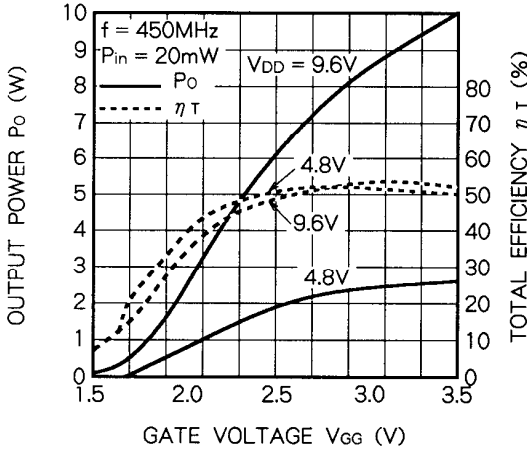
OUTPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY CHARACTERISTICS



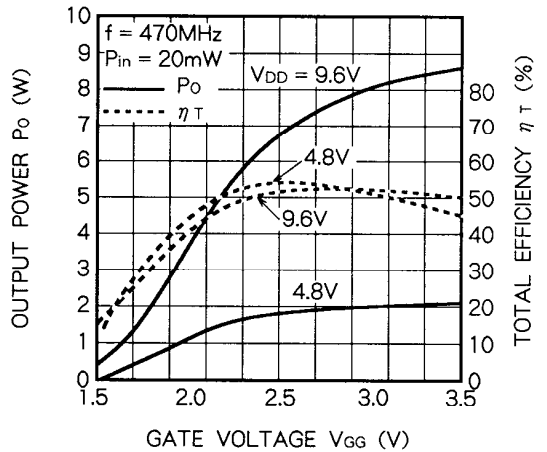
OUTPUT POWER, TOTAL EFFICIENCY VS. SUPPLY VOLTAGE CHARACTERISTICS



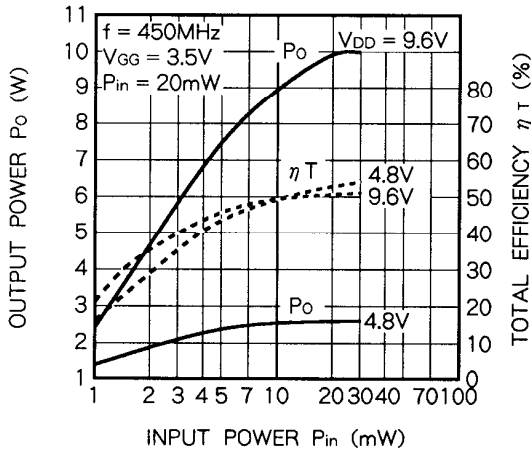
OUTPUT POWER, TOTAL EFFICIENCY VS. GATE VOLTAGE CHARACTERISTICS



OUTPUT POWER, TOTAL EFFICIENCY VS. GATE VOLTAGE CHARACTERISTICS



OUTPUT POWER, TOTAL EFFICIENCY VS. INPUT POWER CHARACTERISTICS



OUTPUT POWER, TOTAL EFFICIENCY VS. INPUT POWER CHARACTERISTICS

