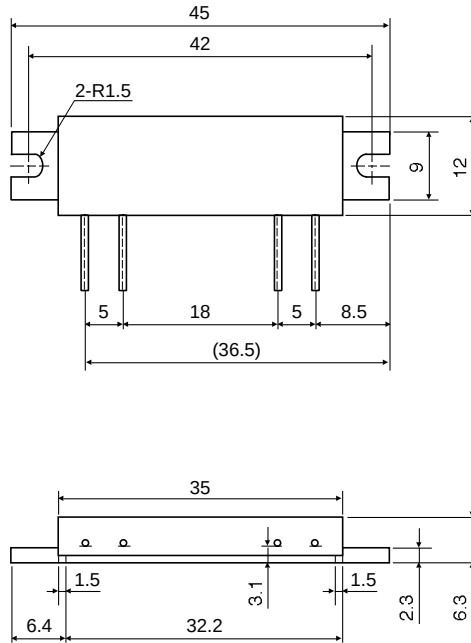


SILICON MOS FET POWER AMPLIFIER, 806-870MHz, 3.8W, FM PORTABLE RADIO

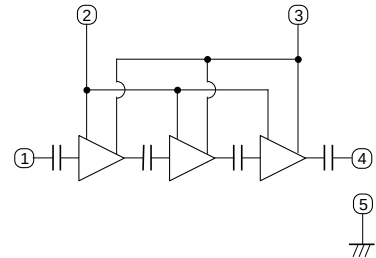
OUTLINE DRAWING

Dimensions in mm



H50

BLOCK DIAGRAM



PIN:

- ① P_{in} : RF INPUT
- ② V_{GG} : GATE BIAS SUPPLY
- ③ V_{DD} : DRAIN BIAS SUPPLY
- ④ 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	$Z_G=Z_L=50\Omega$	9	V
V_{GG}	Gate bias voltage		5.5	V
P_{in}	Input power	$f=806\text{-}870\text{MHz}$, $Z_G=Z_L=50\Omega$	6	mW
P_o	Output power	$f=806\text{-}870\text{MHz}$, $Z_G=Z_L=50\Omega$	6	W
T_c (OP)	Operation case temperature	$f=806\text{-}870\text{MHz}$, $Z_G=Z_L=50\Omega$	-30 to +100	$^{\circ}\text{C}$
T_{stg}	Storage temperature		-40 to +100	$^{\circ}\text{C}$

Note. Above parameters are guaranteed independently.

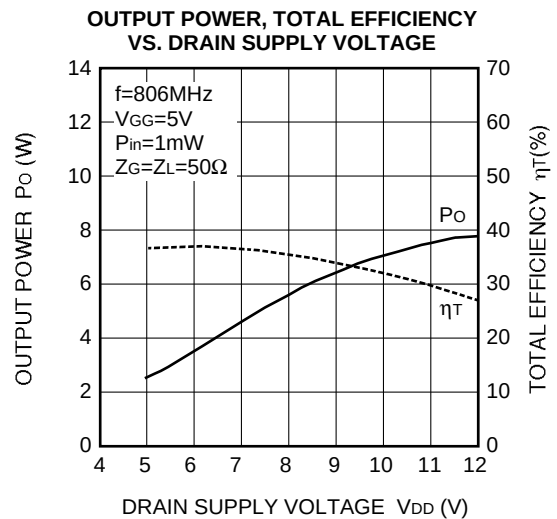
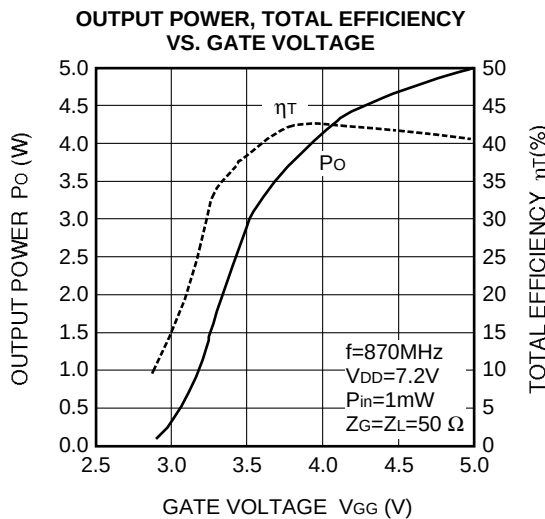
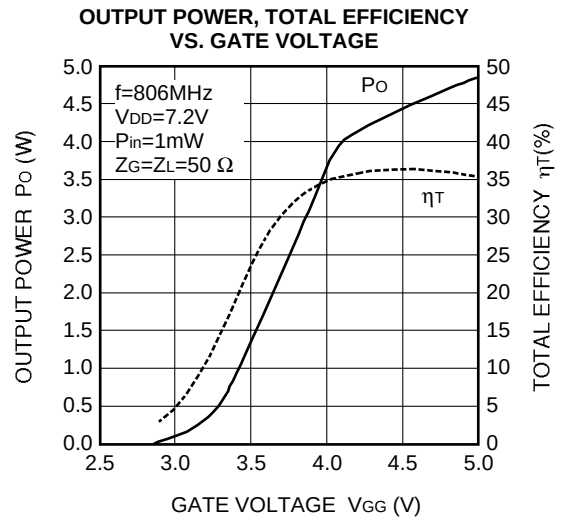
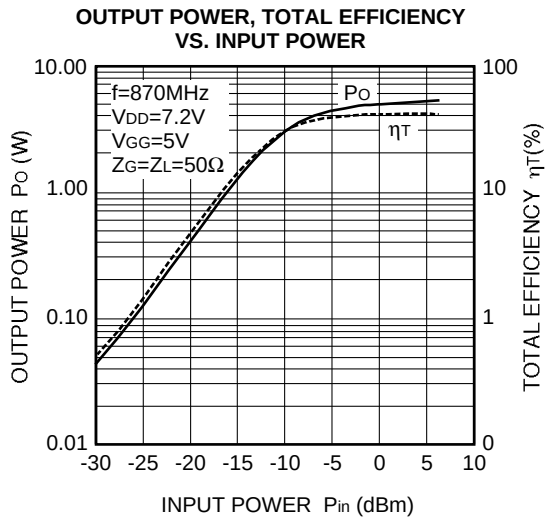
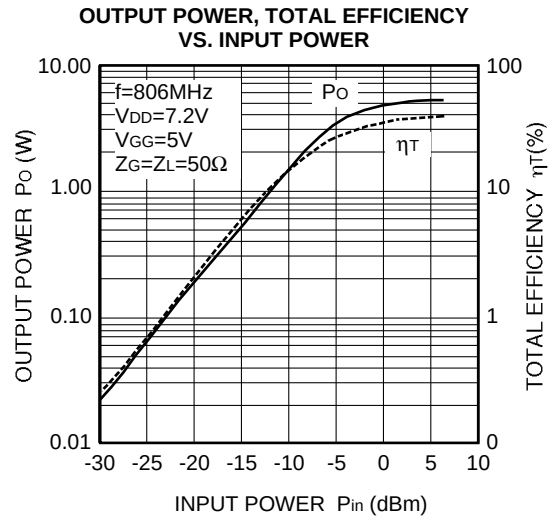
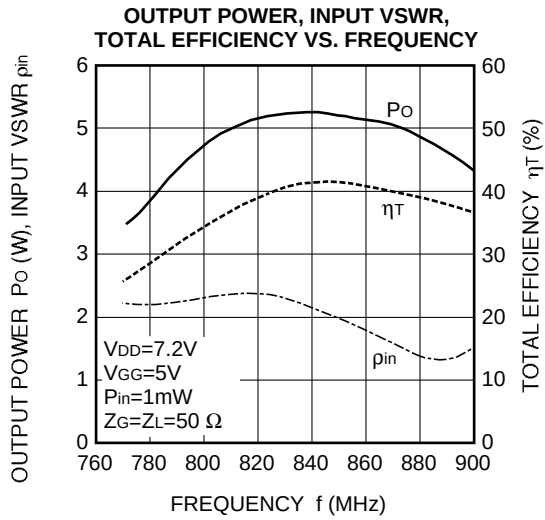
ELECTRICAL CHARACTERISTICS ($T_c=25^{\circ}\text{C}$, $Z_G=Z_L=50\Omega$ unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		806	870	MHz
P_o	Output power	$V_{DD}=7.2\text{V}$, $V_{GG}=5\text{V}$, $P_{in}=1\text{mW}$, $Z_G=Z_L=50\Omega$	3.8		W
$2f_o$	2nd. harmonic			-30	dBc
ρ_{in}	Input VSWR			4	—
η_T	Total efficiency	$P_o=3.8\text{W}$ ($V_{GG}=\text{Adjust}$), $V_{DD}=7.2\text{V}$, $P_{in}=1\text{mW}$, $Z_G=Z_L=50\Omega$	30		%
—	Stability	$Z_G=Z_L=50\Omega$, $V_{DD}=5\text{-}9.3\text{V}$, Load VSWR <4:1	No parasitic oscillation		—
—	Load VSWR tolerance	$V_{DD}=9\text{V}$, $P_{in}=1\text{mW}$, $P_o=3.8\text{W}$ ($V_{GG}=\text{Adjust}$), $Z_L=20:1$	No degradation or destroy		—

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

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TYPICAL PERFORMANCE DATA



SILICON MOS FET POWER AMPLIFIER, 806-870MHz, 3.8W, FM PORTABLE RADIO

