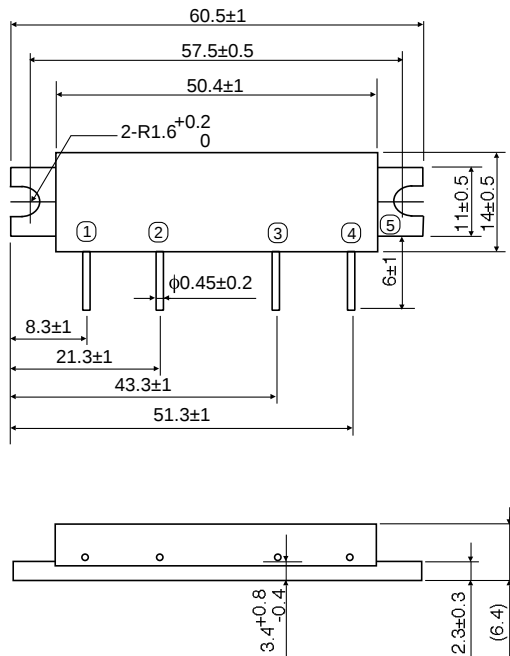


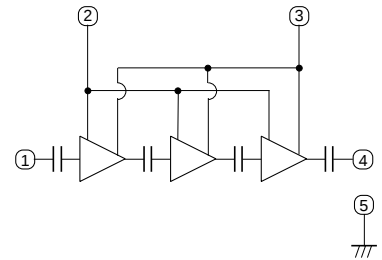
SILICON MOS FET POWER AMPLIFIER, 820-851MHz, 6W, FM PORTABLE RADIO

OUTLINE DRAWING

Dimensions in mm



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	$V_{GG} \leq 3.5\text{V}$, $Z_G = Z_L = 50\Omega$	17	V
V_{GG}	Gate bias voltage		5.5	V
P_{in}	Input power	$f=820\text{-}851\text{MHz}$, $Z_G = Z_L = 50\Omega$	10	mW
P_o	Output power	$f=820\text{-}851\text{MHz}$, $Z_G = Z_L = 50\Omega$	10	W
T_c (OP)	Operation case temperature	$f=820\text{-}851\text{MHz}$, $Z_G = Z_L = 50\Omega$	-30 to +100	$^{\circ}\text{C}$
T_{stg}	Storage temperature		-40 to +100	$^{\circ}\text{C}$

Note. Above parameters are guaranteed independently.

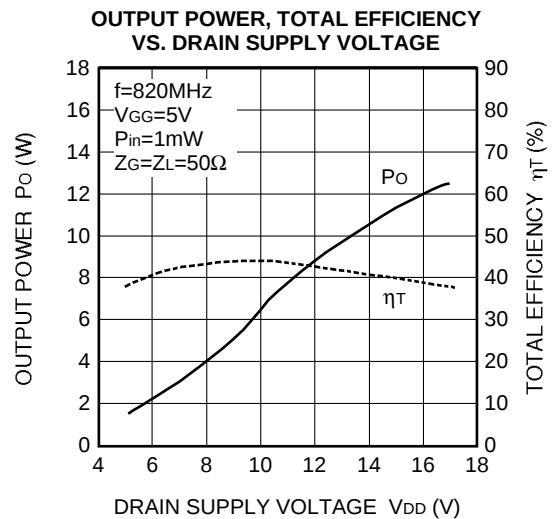
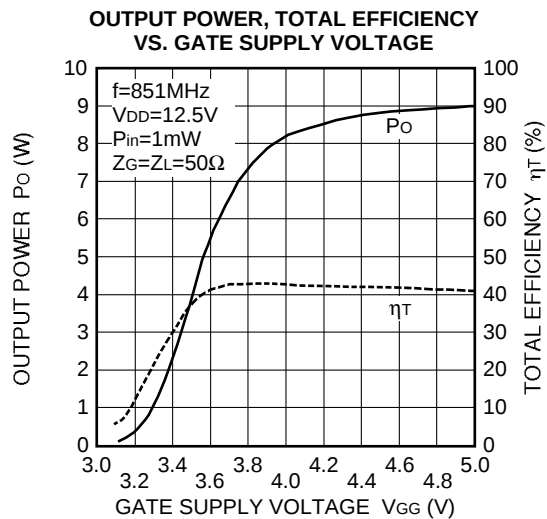
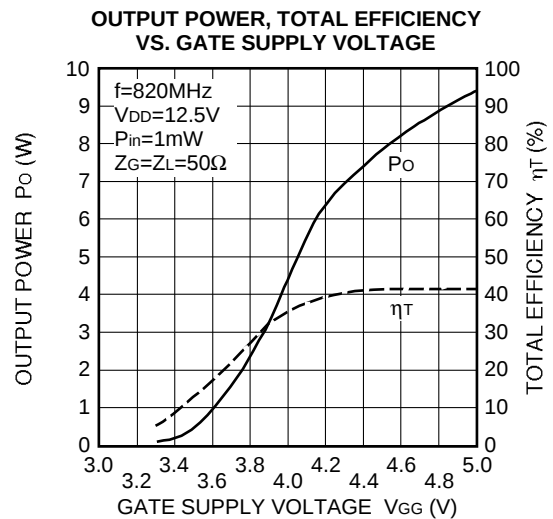
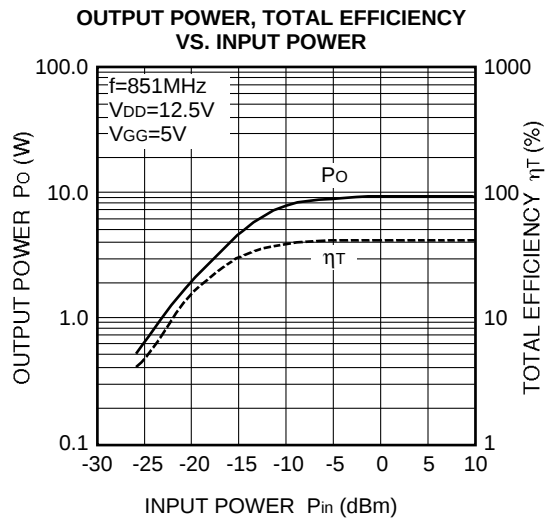
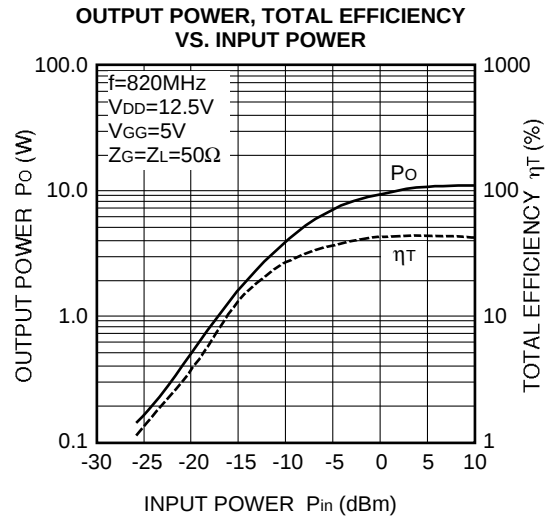
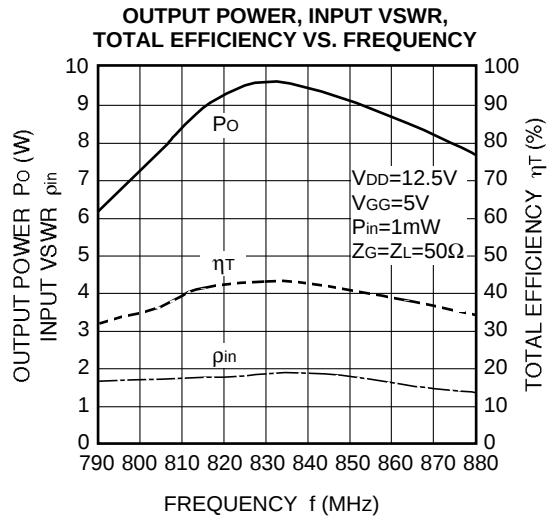
ELECTRICAL CHARACTERISTICS ($T_c=25^{\circ}\text{C}$, $Z_G=Z_L=50\Omega$ unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		820	851	MHz
P_o	Output power	$V_{DD}=12.5\text{V}$, $V_{GG}=5\text{V}$, $P_{in}=1\text{mW}$	6		W
η_T	Total efficiency		35		%
$2f_o$	2nd. harmonic			-30	dBc
ρ_{in}	Input VSWR			4	-
-	Stability	$Z_G = Z_L = 50\Omega$, $V_{DD}=10\text{-}16\text{V}$, Load VSWR<4:1	No parasitic oscillation		-
-	Load VSWR tolerance	$V_{DD}=15.2\text{V}$, $P_{in}=1\text{mW}$, $P_o=6\text{W}$ (V_{GG} 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, 820-851MHz, 6W, FM PORTABLE RADIO

