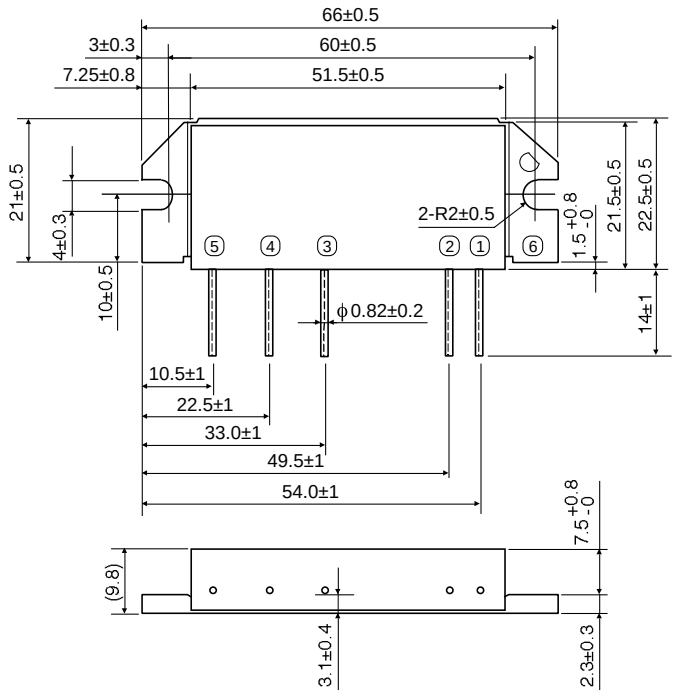
M57788LR

400-430MHz, 13.5V, 47W, FM MOBILE RADIO

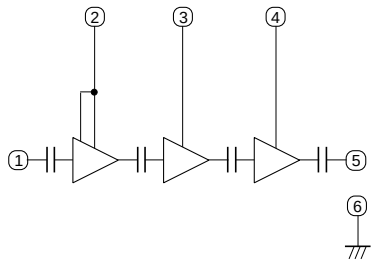
OUTLINE DRAWING

Dimensions in mm



H3R

BLOCK DIAGRAM



PIN:
①Pin : RF INPUT
②VCC1: 1st. DC SUPPLY
③VCC2: 2nd. DC SUPPLY
④VCC3: 3nd. DC SUPPLY
⑤PO : RF OUTPUT
⑥GND: FIN

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

Symbol	Parameter	Conditions	Ratings	Unit
V_{CC}	Supply voltage	$Z_G=Z_L=50\Omega$	17	V
I_{CC}	Total current	$Z_G=Z_L=50\Omega$	12	A
P_{in} (max)	Input power	$Z_G=Z_L=50\Omega$, $V_{CC1}\leq 13.5V$	800	mW
P_O (max)	Output power	$Z_G=Z_L=50\Omega$, $V_{CC1}\leq 13.5V$	50	W
T_C (OP)	Operation case temperature	$Z_G=Z_L=50\Omega$, $V_{CC1}\leq 13.5V$	-30 to +110	°C
T_{stg}	Storage temperature		-40 to +110	°C

Note. Above each maxmum ratings are guaranteed independently.

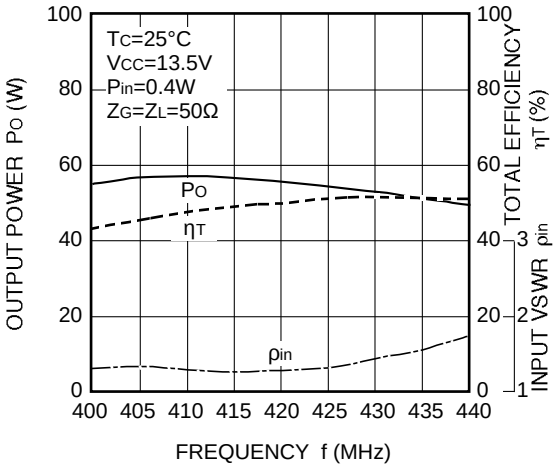
ELECTRICAL CHARACTERISTICS (Tc=25°C unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		400	430	MHz
P_O	Output power	V_{CC}=13.5V, P_{in}=400mW, $Z_G=Z_L=50\Omega$	47		W
η_T	Total efficiency		40		%
$2f_O$	2nd. harmonic			-30	dBc
$3f_O$	3nd. harmonic			-30	dBc
ρ_{in}	Input VSWR			2.8	—
—	Load VSWR tolerance	V_{CC}=15.2V, P_O=47W (P_{in}:Controlled), $Z_G=50\Omega$, Load VSWR=8:1 (All phase)	No degradation or destroy		—

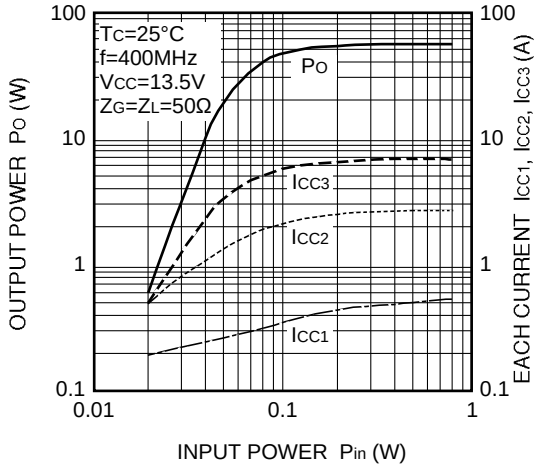
Note. Above parameters, ratings, limits and test conditions are subject to change.

TYPICAL PERFORMANCE DATA

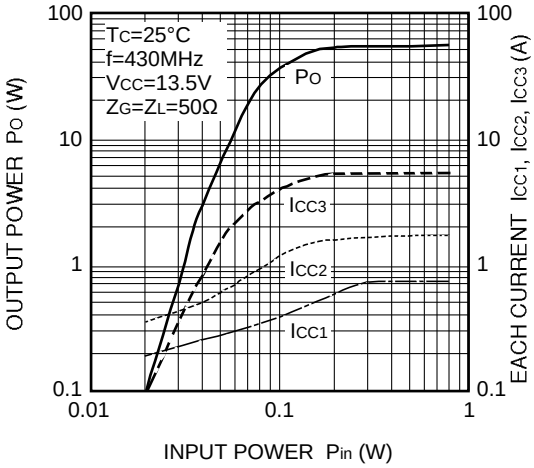
OUTPUT POWER, TOTAL EFFICIENCY INPUT VSWR VS. FREQUENCY



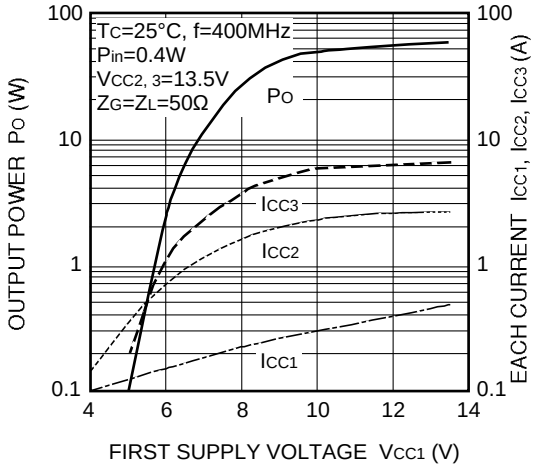
OUTPUT POWER, EACH CURRENT VS. INPUT POWER



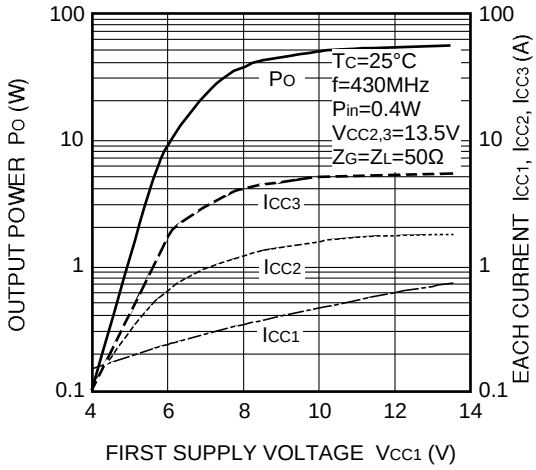
OUTPUT POWER, EACH CURRENT VS. INPUT POWER



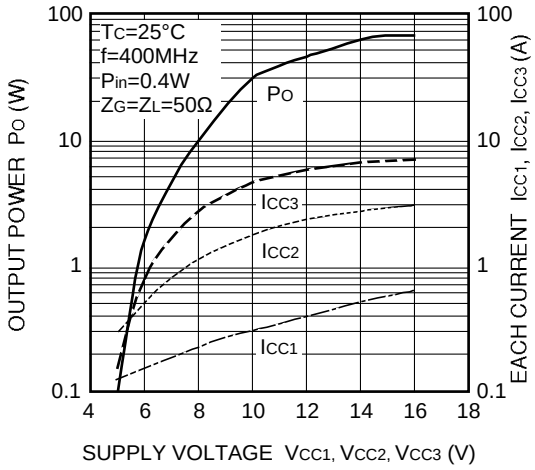
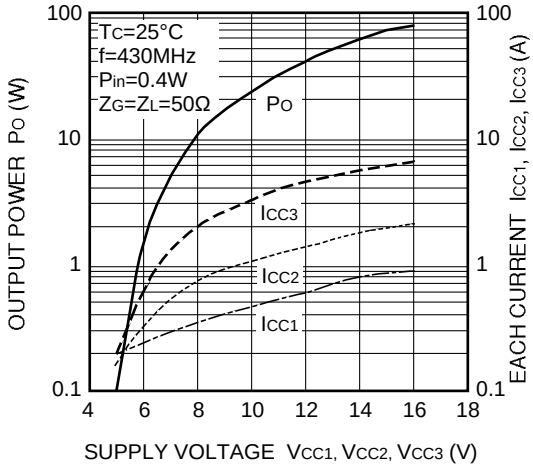
OUTPUT POWER, EACH CURRENT VS. FIRST SUPPLY VOLTAGE



OUTPUT POWER, EACH CURRENT VS. FIRST SUPPLY VOLTAGE



OUTPUT POWER, EACH CURRENT VS. SUPPLY VOLTAGE



OUTPUT POWER, EACH CURRENT VS. SUPPLY VOLTAGE