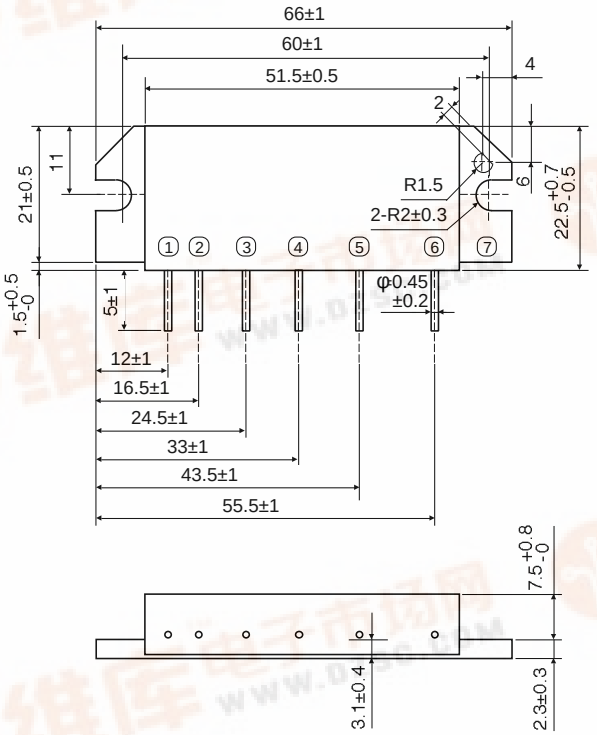
MITSUBISHI RF POWER MODULE

M67766C

806-825MHz, 12.5V, 16W, DIGITAL MOBILE RADIO

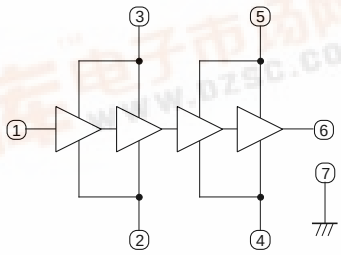
OUTLINE DRAWING

Dimensions in mm



H3

BLOCK DIAGRAM



PIN:
①Pin : RF INPUT
②VBB1: 1st. BASE BIAS SUPPLY
③VCC1: 1st. COLLECTOR BIAS SUPPLY
④VBB2: 2nd. BASE BIAS SUPPLY
⑤VCC2: 2nd. COLLECTOR BIAS SUPPLY
⑥PO : RF OUTPUT
⑦GND: FIN

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

Symbol	Parameter	Conditions	Ratings	Unit
V_{CC1}	Supply voltage	$Z_G=Z_L=50\Omega$, $V_{BB1}=8V$	9	V
V_{CC2}	Supply voltage	$Z_G=Z_L=50\Omega$, $V_{BB2}=8V$	17	V
V_{BB1}	Supply voltage	$Z_G=Z_L=50\Omega$, $V_{CC1}=8V$	9	V
V_{BB2}	Supply voltage	$Z_G=Z_L=50\Omega$, $V_{CC2}=12.5V$	9	V
I_{CC}	Total current	$Z_G=Z_L=50\Omega$	3	A
$P_{in\ (max)}$	Input power	$Z_G=Z_L=50\Omega$, $V_{CC2}=12.5V$	10	mW
$P_{O\ (max)}$	Output power	$Z_G=Z_L=50\Omega$, $V_{CC2}=12.5V$	20	W
$T_{C\ (OP)}$	Operation case temperature	$Z_G=Z_L=50\Omega$	-30 to +110	°C
T_{stg}	Strage temperature		-40 to +110	°C

Note. Above parameters are guaranteed independently.

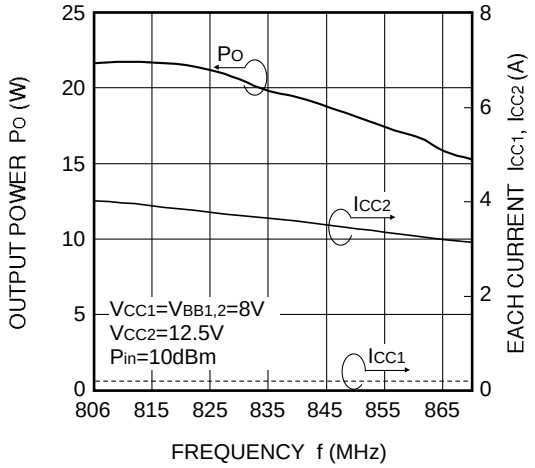
ELECTRICAL CHARACTERISTICS (Tc=25°C unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		806	825	MHz
P_O	Output power	$V_{CC1}=V_{BB}=8V$, $V_{CC2}=12.5V$, $P_{in}=10dBm$, $Z_G=Z_L=50\Omega$	16		W
η_T	Total efficiency	$V_{CC1}=V_{BB}=8V$, $V_{CC2}=12.5V$, $Z_G=Z_L=50\Omega$, $P_O=6W$ (P_{in}:controlled)	20		%
2fo	2nd. harmonic			-30	dBc
ρ_{in}	Input VSWR			2.5	-
IMD3	3rd. internal modulation	$V_{CC1}=V_{BB}=8V$, $V_{CC2}=12.5V$, $Z_G=Z_L=50\Omega$, $P_{O(AVE)}=6W$(Pin:controlled), 2tone, $\Delta f=10kHz$		-24	dBc
IMD5	5th. internal modulation			-28	dBc
-	Load VSWR tolerance	$V_{CC1}=8.5V$, $V_{BB}=8V$, $V_{CC2}=17V$, $P_O=20W$ (P_{in}:controlled), $Z_G=50\Omega$, Load VSWR< 2:1	No degradation or destroy		-

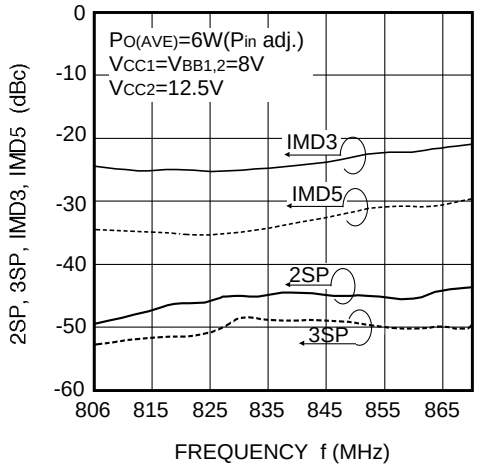
Note. Above parameters, ratings, limits and test conditions are subject to change.

TYPICAL PERFORMANCE DATA

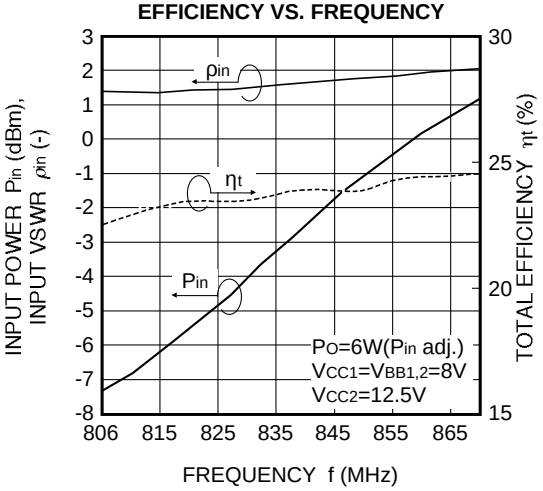
OUTPUT POWER, EACH CURRENT VS. FREQUENCY



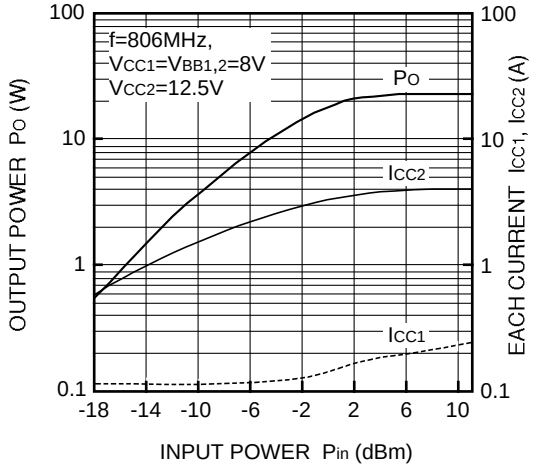
SUPRIUS, IMD VS. FREQUENCY



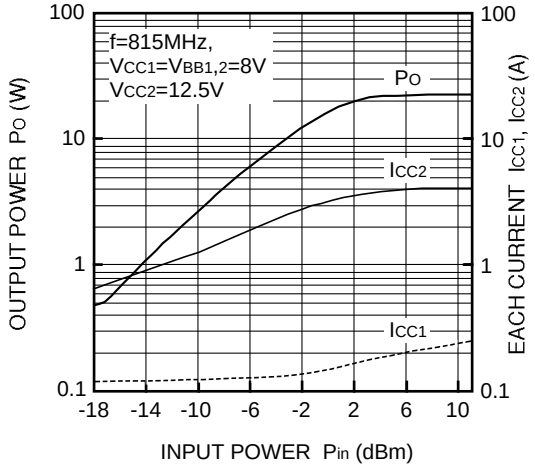
INPUT POWER, INPUT VSWR, TOTAL EFFICIENCY VS. FREQUENCY



OUTPUT POWER, EACH CURRENT VS. INPUT POWER



OUTPUT POWER, EACH CURRENT VS. INPUT POWER



OUTPUT POWER, EACH CURRENT VS. INPUT POWER