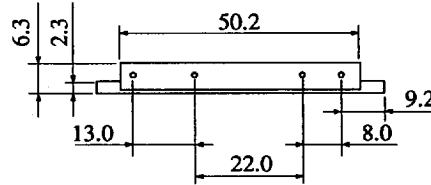
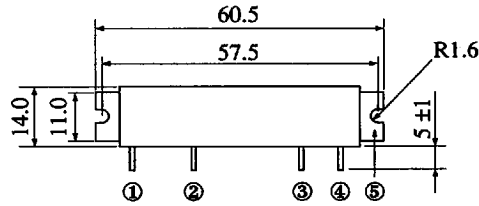


## HIGH FREQUENCY POWER MOS FET MODULE

UHF Band 890-915 MHz

### ■ FEATURES

- Include Input and Output Matching Circuit
- Easy to Control Output Power
- Superior to Stability at Load Mismatching



- ① Pin
  - ②  $V_{APC}$
  - ③  $V_{DD}$
  - ④ Pout
  - ⑤ GND
- (Dimensions in mm)

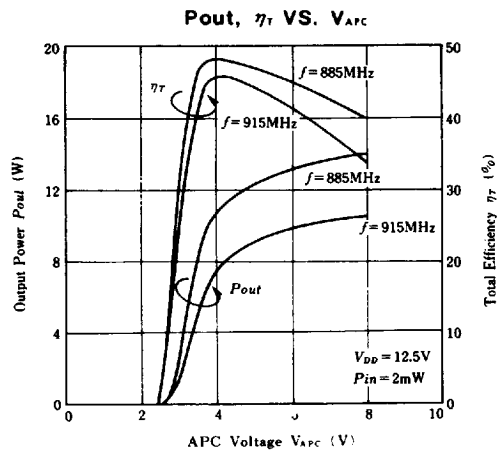
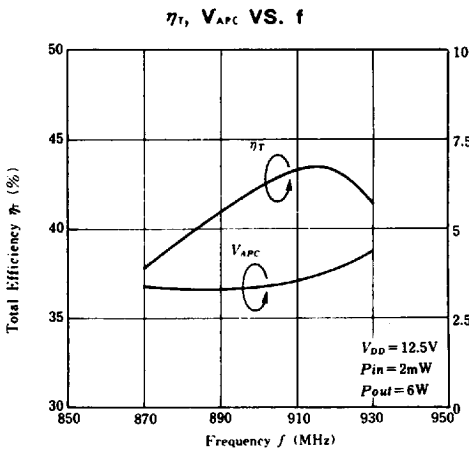
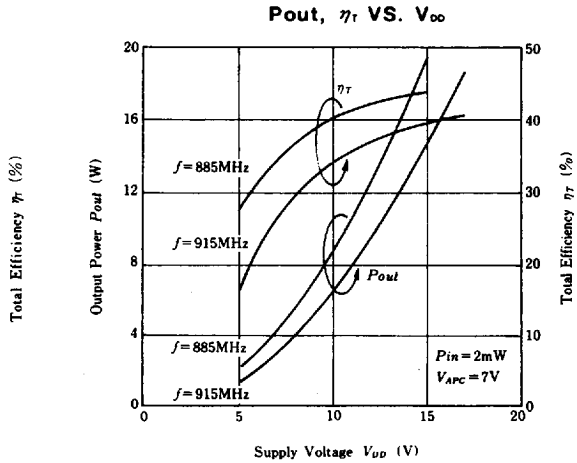
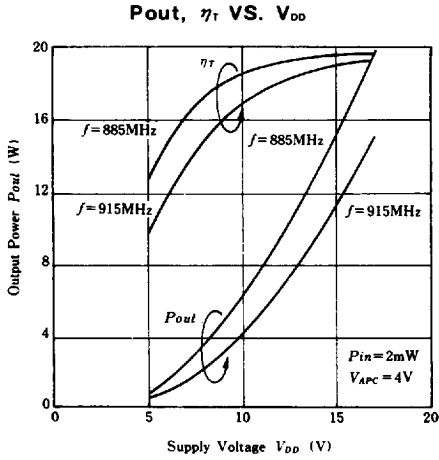
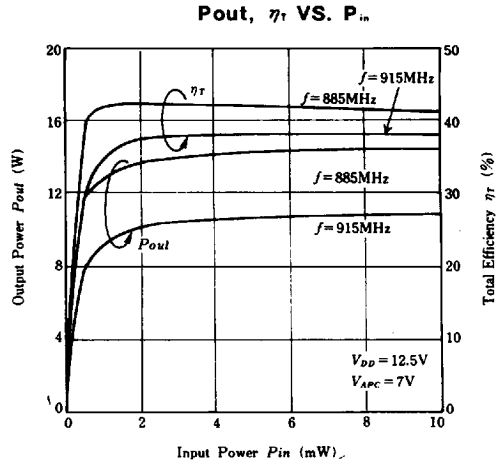
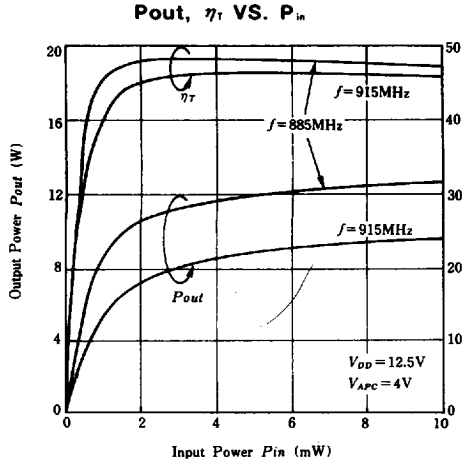
### ■ ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )

Item	Symbol	Rating	Unit
Supply Voltage	$V_{DD}$	17	V
Maximum Circuit Current	$I_D$	3.0	A
APC Voltage	$V_{APC}$	8	V
Maximum Input Power	$P_{in}$	20	mW
Operating Maximum Case Temperature	$T_{c(op)}$	-40 ~ +100	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-45 ~ +125	$^\circ\text{C}$

### ■ ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )

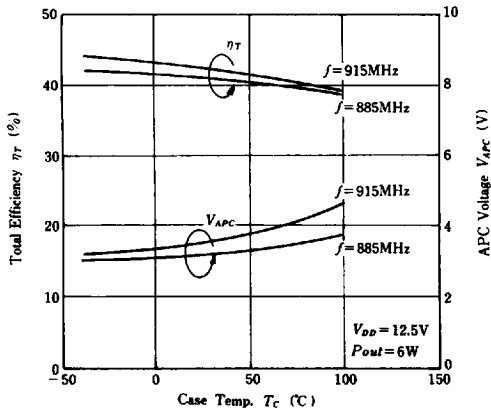
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Drain Cutoff Current	$I_{DS}$	$V_{DD1} = V_{DD2} = 17\text{V}$ , $V_{APC} = 0$	—	—	500	$\mu\text{A}$
Total Efficiency	$\eta_T$	$f = 890, 915\text{MHz}$	35	40	—	%
2nd Harmonic Distortion	2nd H.D.	$P_{in} = 2\text{mW}$	—	-50	-30	dB
3rd Harmonic Distortion	3rd H.D.	$V_{DD} = 12.5\text{V}$	—	-50	-30	dB
Input VSWR	VSWR(in)	$P_{out} = 6\text{W}$ (at APC Control)	—	1.5	3.0	—
Output VSWR	VSWR(out)	$Z_{in} = Z_{out} = 50\Omega$	—	1.5	—	—
Stability	—	$V_{DD} = 12.5\text{V}$ , $P_{in} = 2\text{mW}$ , $f = 890\text{MHz}$ , $P_{out} = 6\text{W}$ (at APC Control), $R_L = 50\Omega$ , Output VSWR $\neq \infty$ All Phase, $t = 20\text{sec}$	No Parasitic Oscillation			—

HITACHI/(OPTOELECTRONICS)

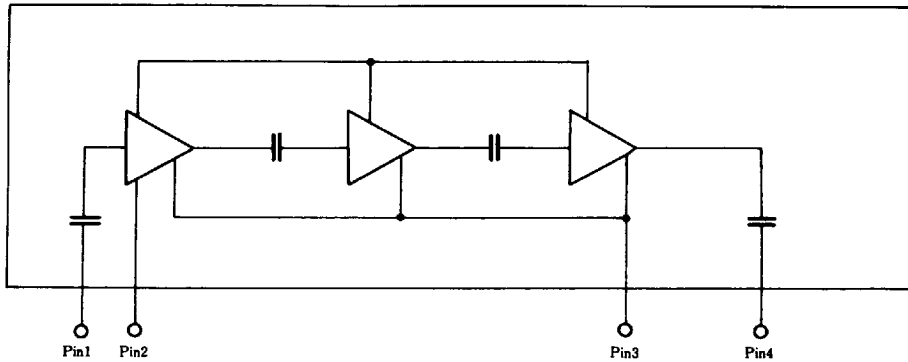


HITACHI/(OPTOELECTRONICS)

$\eta_T, V_{APC}$  VS.  $T_C$



■ INTERNAL DIAGRAM



■ TEST SYSTEM DIAGRAM

