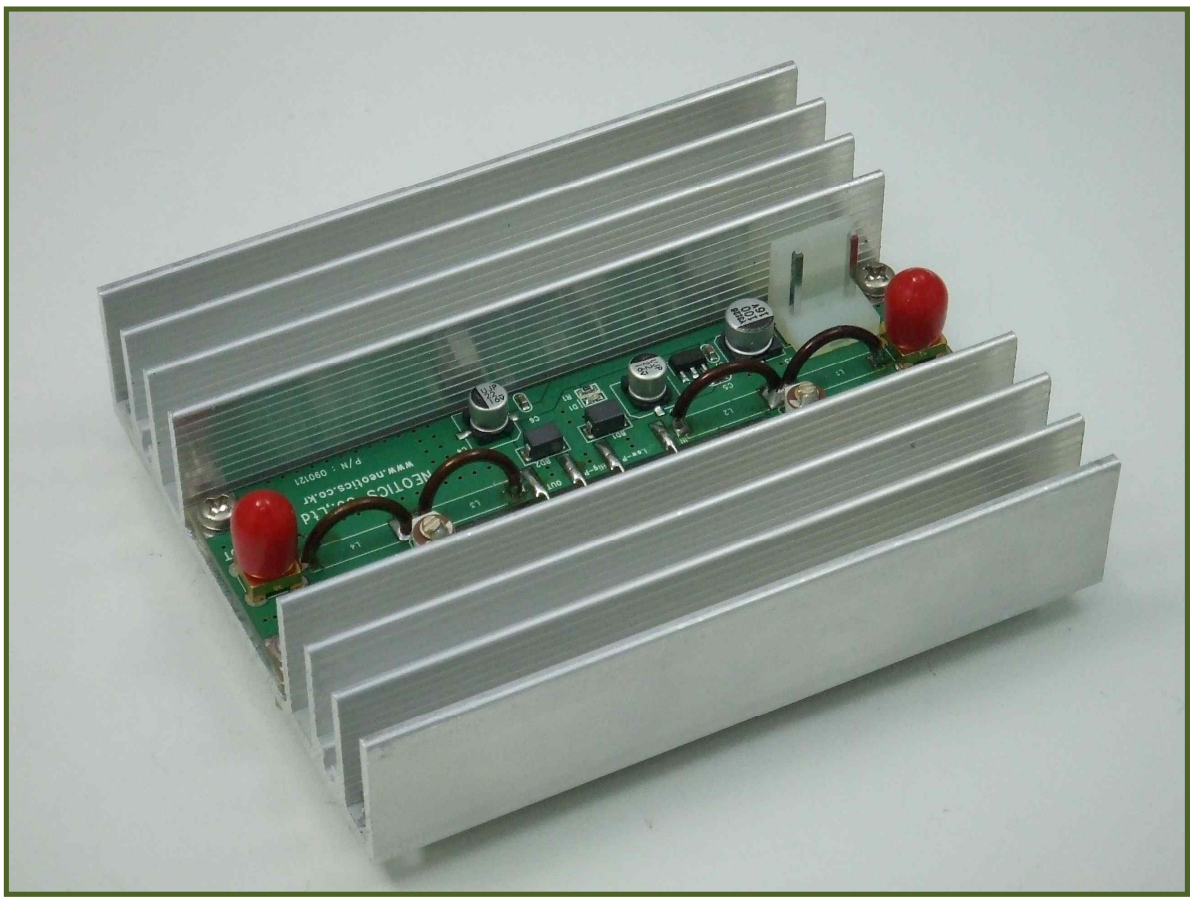
400MHz-470MHz RF Power Amplifier

for Transmitter (Max 7W)

NR - A4047B Ver 7.0

Related Product : NC-A4047 (400MHz-470MHz RF Power Amplifier for Transceiver)
NC-AMP500 (20MHz-500MHz RF Power Amplifier for Transmitter)



R&D : http://www.neotics.co.kr E-Mail : neotics@neotics.co.kr
Sales : http://www.logiccamp.co.kr E-Mail : sales@logiccamp.co.kr

1. 400MHz-470MHz RF Power Amplifier for Transmitter (Max7W).

*This is a large output--max 7W--power amplifier for wireless transmission.

*In case of long distance transmission being disabled due to weak radio waves or low power output, you can obtain maximum 7W with this amplifier.

*You can refer to basic amplifier instructions such as accurate use of amplifier, circuit development, antenna pattern handling.

*This amplifier can solve the problem of long distance transmission, powering up your transmitter products.

2. Features & Application.

. Facilitates long distance transmission.
. Reception/transmission convertible, applicable to transmitter as well as Transceiver.
. Transmission mode when powered, reception mode when power cut.
. Works as amplifier for transmitter only, depending on specifications.
. High frequency relay is used for minor signal loss in transmission/reception conversion.
. With LC-filter built in input/output section, you get less noise and better signal.
. SMA connector for input/output decreases signal loss.
. LED attached to power supply line indicates driver/final power supply state.
. High amplification and rare noise, with the use of RF Module dedicated to amplifier.
. Suitable for battery run devices as well, being able to work on low voltage.
(5V~9V : out put varies depending on voltage)
. Amplification of transmitter under weak radio wave/low power output.

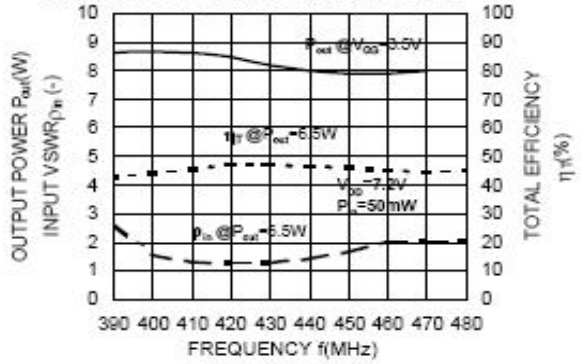
4. 400MHz-470MHz RF Power Amplifier Specification

ELECTRICAL CHARACTERISTICS (T_{case}=+25°C, Z_G=Z_L=50Ω, unless otherwise specified)

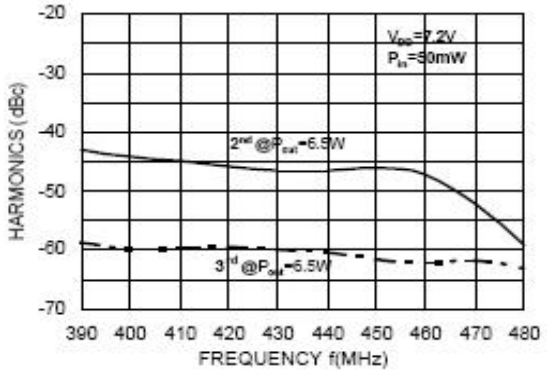
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
f	Frequency Range		400		470	MHz
P_{out}	Output Power	V_{DD}=7.2V,V_{GG}=3.5V, P_{in}=50mW	7			W
η_T	Total Efficiency	P_{out}=6.5W (V_{GG} control), V_{DD}=7.2V, P_{in}=50mW	40			%
$2f_o$	2nd Harmonic				-25	dBc
ρ_{in}	Input VSWR				4:1	—
I_{GG}	Gate Current			1		mA
—	Stability	V_{DD}=4.0-9.2V, P_{in}=25-70mW, P_{out}<8W (V_{GG} control), Load VSWR=4:1	No parasitic oscillation			—
—	Load VSWR Tolerance	V_{DD}=9.2V, P_{in}=50mW, P_{out}=7W (V_{GG} control), Load VSWR=20:1	No degradation or destroy			—

All parameters, conditions, ratings, and limits are subject to change without notice.

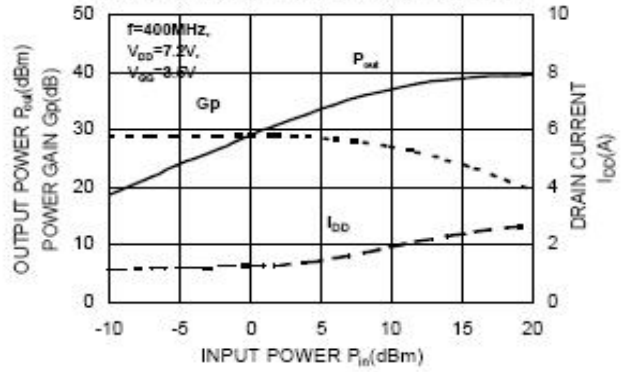
OUTPUT POWER, TOTAL EFFICIENCY, and INPUT VSWR versus FREQUENCY



2nd, 3rd HARMONICS versus FREQUENCY



OUTPUT POWER, POWER GAIN and DRAIN CURRENT versus INPUT POWER



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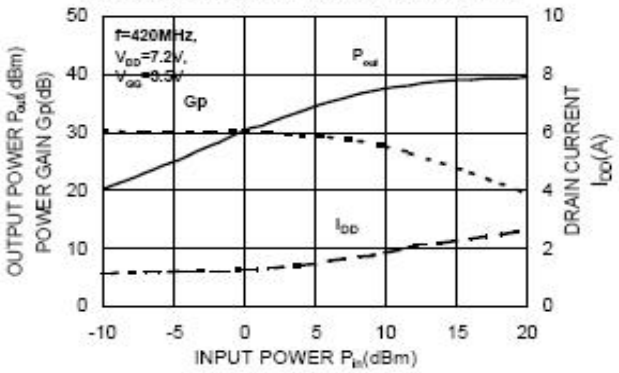

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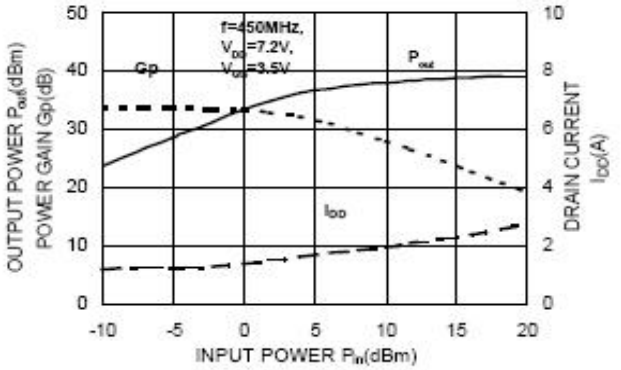

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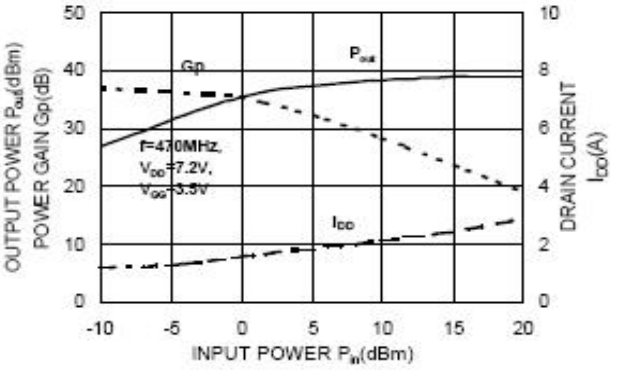
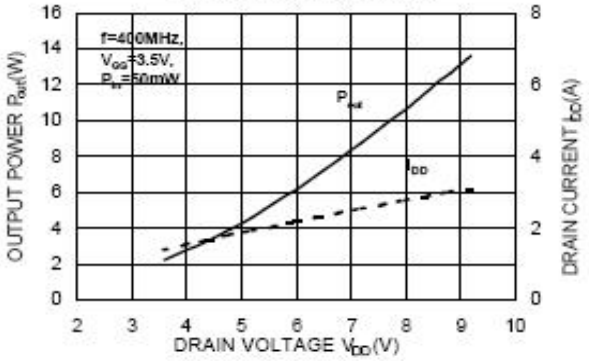


OUTPUT POWER and DRAIN CURRENT versus DRAIN VOLTAGE



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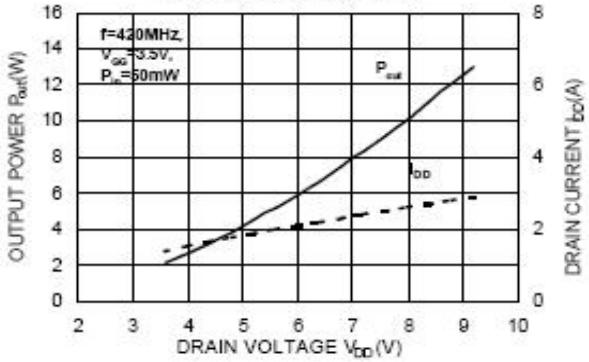
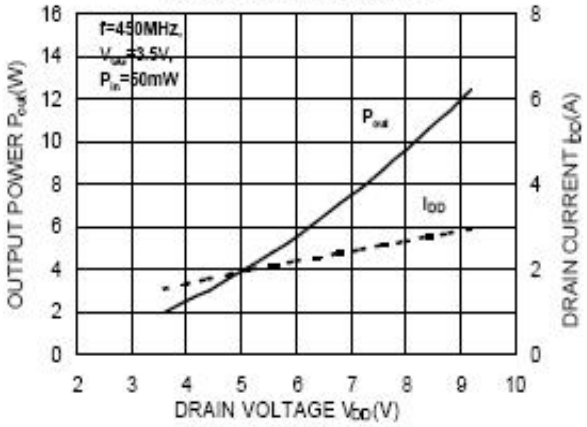


TYPICAL PERFORMANCE (T_{case}=+25°C, Z_G=Z_L=50Ω, unless otherwise specified)

OUTPUT POWER and DRAIN CURRENT versus DRAIN VOLTAGE



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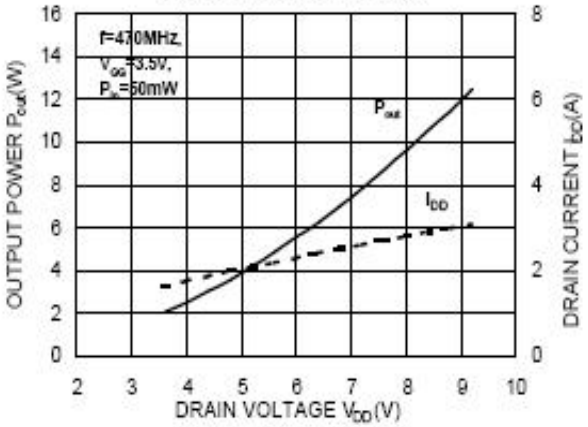
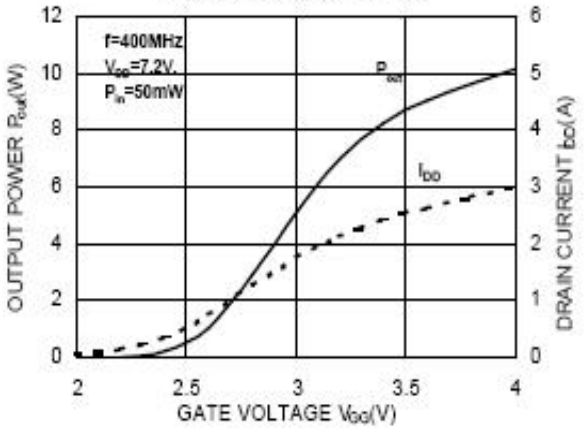


OUTPUT POWER and DRAIN CURRENT versus GATE VOLTAGE



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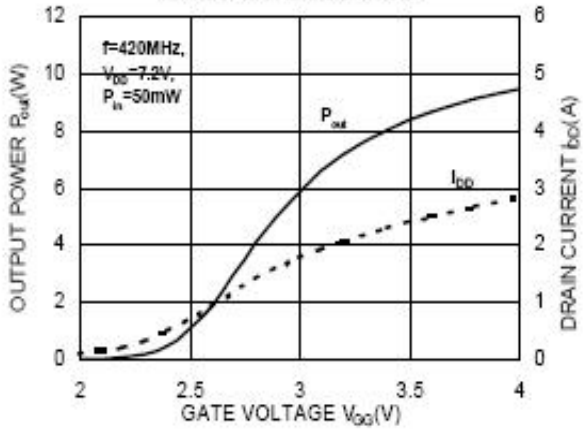

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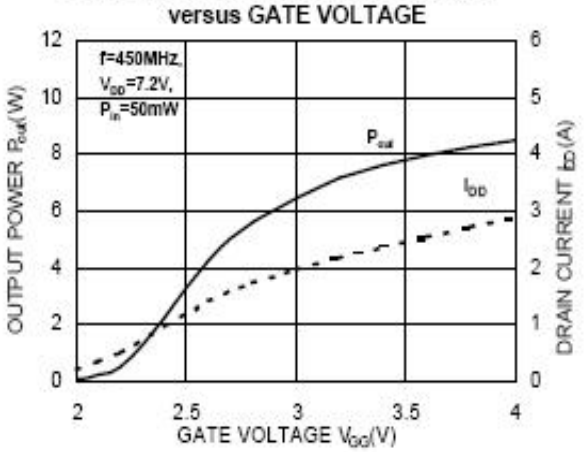

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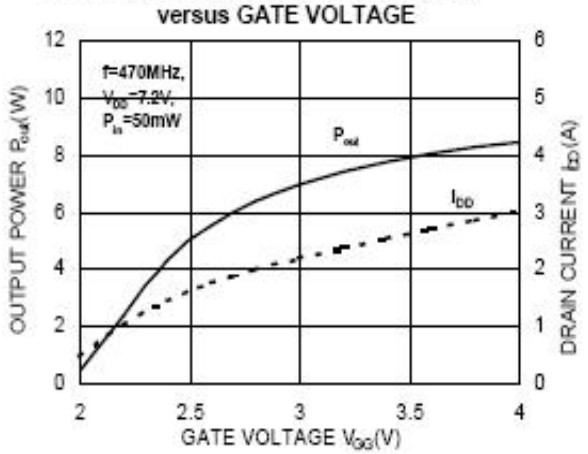
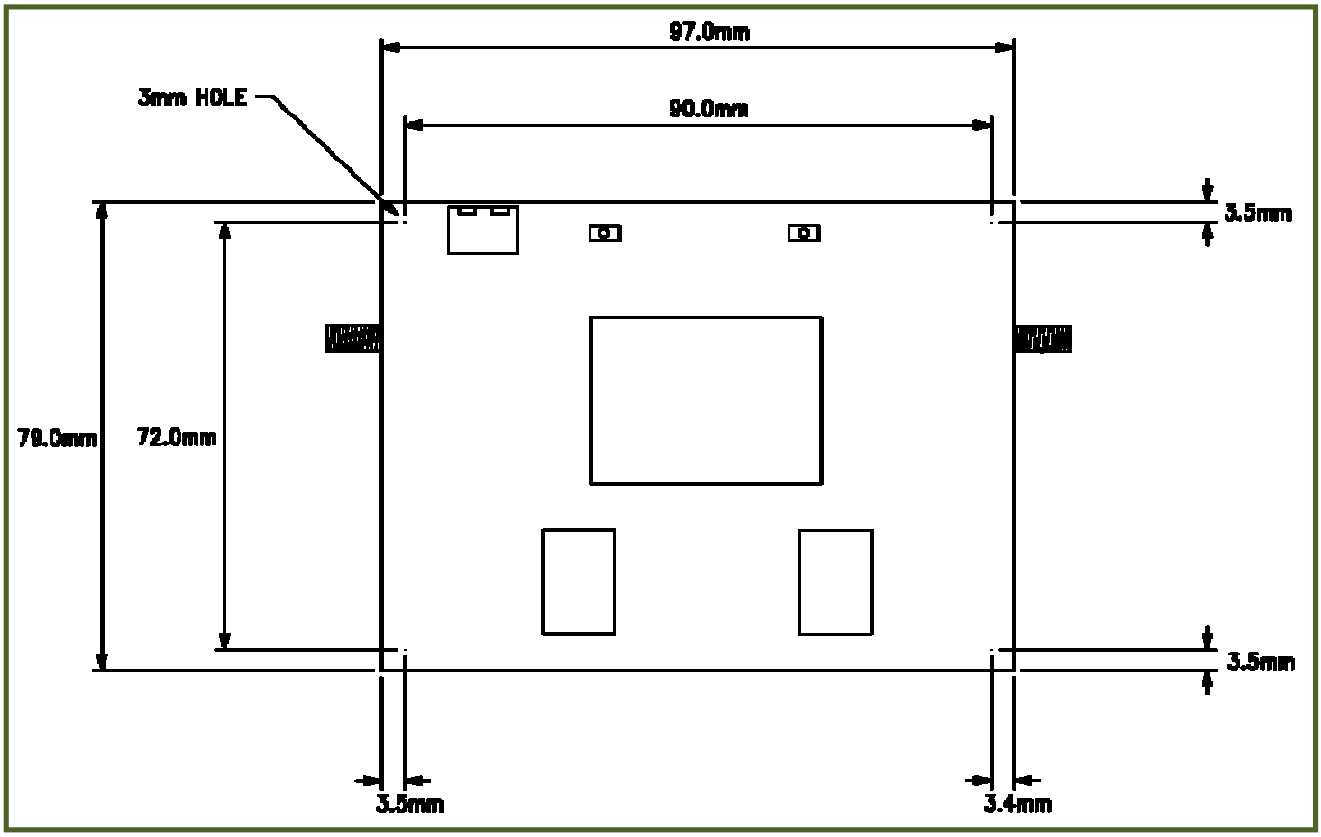


5. 400MHz-470MHz RF Power Amplifier Size



****** Caution*******

1. Check the features first to connect with other equipment.
2. This circuit is strictly tested.
3. The deveolper, manufacturer or dealer is not responsible for any malfunctioning/damage caused by connection with other equipment.
4. Appropriate permit /approval is required for some products utilizing this module, depending on functions and usages.

- **For more information and inquiry, please refer to the sites below.**