

UN0231N

RF Power Amplifier Module

For the preamplifier of the transmitting section in a cellular phone

■ Features

- High efficiency with super miniature, 0.08 cc package(7.5 × 7.5 × 1.7 mm)

■ Absolute Maximum Ratings $T_a=25^\circ\text{C}$

Parameter	Symbol	Ratings	Unit
Power supply voltage 1 *1	V_{DD1}	6	V
Power supply voltage 2 *1	V_{DD2}	6	V
Circuit current 1	I_{DD1}	200	mA
Circuit current 2	I_{DD2}	600	mA
Gate voltage	V_{GG}	-4	V
Max input power	P_{IN}	9	dBm
Allowable power dissipation *3	P_D	2	W
Case temperature *3	T_{case}	-30 to +90	$^\circ\text{C}$
Storage temperature	T_{stg}	-30 to +120	$^\circ\text{C}$

Note) *1 : $V_{GG}=-3.5$ V

*2 : $T_{case}=25^\circ\text{C}$

*3 : The reverse of the device is soldered to the plate

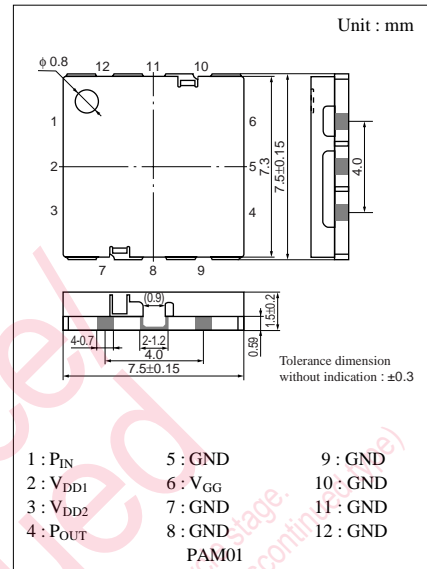
■ Electrical Characteristics $V_{GG}=-2.5$ V, $f=887$ MHz to 925 MHz, $T_a=25^\circ\text{C}\pm 3^\circ\text{C}$, Nominal : $Z_S=Z_L=50 \Omega$

Parameter	Symbol	Conditions	min	typ	max	Unit
Idle current	I_{idl}	$V_{DD1}=V_{DD2}=3.5$ V, $P_{IN}=\text{No}$		110	140	mA
Gate current *2, 3	I_{GG}	$V_{DD1}=V_{DD2}=3.5$ V, $P_{OUT}=26.5$ dBm			4	mA
Circuit current 1 *2, 3	I_{DD1}	$V_{DD1}=V_{DD2}=3.5$ V, $P_{OUT}=26.5$ dBm		410	450	mA
Gain 1 *2, 3	G1	$V_{DD1}=V_{DD2}=3.5$ V, $P_{OUT}=26.5$ dBm	25.0	27.5		dB
2nd harmonics *1, 3	$2f_O$	$V_{DD1}=V_{DD2}=3.5$ V, $P_{OUT}=26.5$ dBm			-30	dBc
3rd harmonics *1, 3	$3f_O$	$V_{DD1}=V_{DD2}=3.5$ V, $P_{OUT}=26.5$ dBm			-30	dBc
Voltage standing wave ratio *1, 3	$V_{SWR IN}$	$V_{DD1}=V_{DD2}=3.5$ V, $P_{OUT}=26.5$ dBm			3	
Adjacent channel leakage power suppression 1 *2, 3	ACPR1	$V_{DD1}=V_{DD2}=3.5$ V, $P_{OUT}=26.5$ dBm ± 900 kHz Detuning, 30 kHz Bandwidth			-45	dBc
Adjacent channel leakage power suppression 2 *2, 3	ACPR2	$V_{DD1}=V_{DD2}=3.5$ V, $P_{OUT}=26.5$ dBm ± 1980 kHz Detuning, 30 kHz Bandwidth			-57	dBc

Note) *1 : No modulation.

*2 : Offset from QPSK signal.

*3 : Measurement point of input and output power is made to the terminal of device.



Marking Symbol : KK

Caution for Safety

 **DANGER**

■ This product contains Gallium Arsenide (GaAs).

GaAs powder and vapor are hazardous to human health if inhaled or ingested. Do not burn, destroy, cut, cleave off, or chemically dissolve the product. Follow related laws and ordinances for disposal. The product should be excluded from general industrial waste or household garbage.

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