

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 : $V_{GG}=-3.5\text{ V}$

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

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

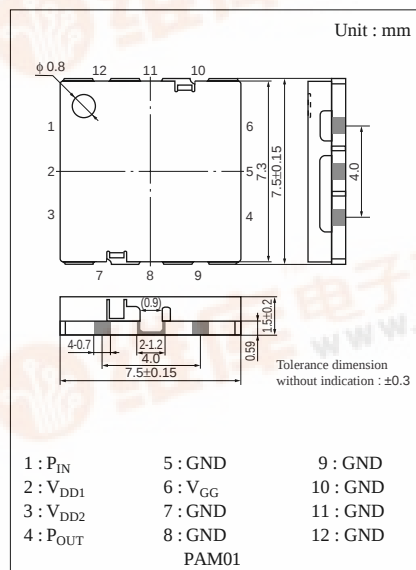
■ Electrical Characteristics $V_{GG}=-2.5\text{ V}$, $f=887\text{ MHz}$ to 925 MHz , $T_a=25^{\circ}\text{C}\pm 3^{\circ}\text{C}$, Nominal : $Z_S=Z_L=50\ \Omega$

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