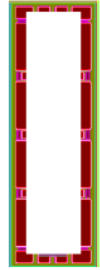


AMT2201-1
1 – 13GHz 40W Power Chip



Key Features :

- Frequency : 1 – 13GHz
- Maximum output power : 40W
- Maximum power added efficiency : 65%
- Supply voltage : 28V, -2.1V
- Chip dimensions : 2.3mm x 0.8mm x 0.1mm
- Applications : wireless communication, transceiver module, radio telecommunication etc.

Description :

AMT2201-1 is a 40W maximum output power chip, the design is based on SiC substrate Gallium Nitrate (GaN) HEMT process, with ground through metal via on the back technology. Maximum 65% efficiency in 1 – 13GHz frequency range.

Electrical Characteristics (Ta = 25°C)

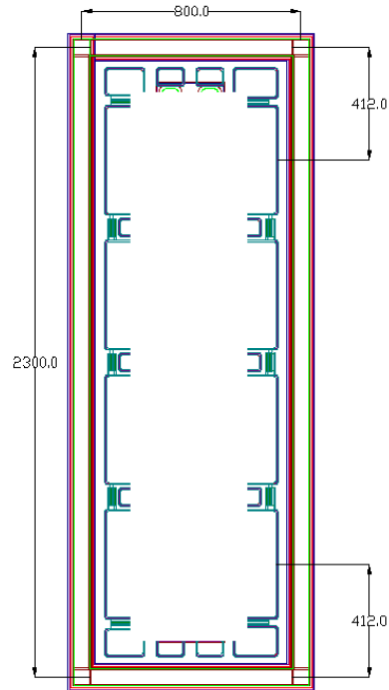
Symbol	Parameter	Test Condition	Value			Unit
			Min	Typical	Max	
Gain	Small Signal Gain	Vd = 28V Vg = -2.1V	-	15	-	dB
Gpae_max	Power Gain at max. Efficiency		-	10	-	dB
Psat_max	Max. saturated Output Power		-	40	-	W
PAE_max	Max. Power Added Efficiency		-	65	-	%

Single Chip Load Pull Characteristics

T = +25° C, Vds = +28V, Vgs = -2.1V, Id_Q = 100Am, Simulation Result :

Frequency (GHz)	Zs	Zl	Gain (dB) @PAE_max	Gain (dB) @Pout_max	Pout(W) @PAE_max	PAEmax (%)	Pout_max (W)
4	0.39-j6.6	14.7+j20.8	11	13	7.3	74	11.6
6	0.68-j3.8	10.5+j14.7	10.1	11.5	8.1	69	11.1
8	0.85-j2	6.7+j12.7	8	9	8.9	65	11
10	0.86-j0.7	5.2+j9.4	6.5	7.5	8.7	61	10.9
12	0.87-j0.43	3.8+j8	5	6	8.5	58	10.8

Chip Dimension (Unit : μm)



Please see Appendix A for details.