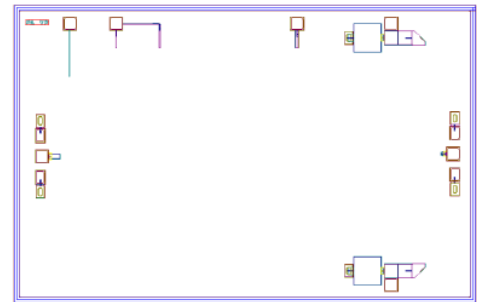


**AMT1117**  
**34 – 36GHz Power Amplifier Chip**



**Key Features :**

- Frequency range : 34 – 36GHz
- Typical small signal gain : 28dB
- Typical output power : 26dBm
- Power added efficiency : 18%
- Voltage bias : 5.0V, -0.5V
- Chip dimensions : 3.3mm x 2.1mm x 0.1mm
- Applications : wireless communication, transceiver module, radio telecommunication etc.

**Description :**

AMT1117 chip is designed by Gallium Arsenide (GaAs) 0.15µm pHEMT process, a high performance power amplifier. It uses dual voltage operation, with drain voltage Vds at 5.0V, it provides 26dBm output power in 34 - 36GHz frequency range. This chip is designed with ground through metal vias on the back technology. All chip products are 100% RF tested.

**Absolute Maximum Ratings (Ta = 25°C)**

Symbol	Parameter	Value	Remark
Vd	Drain Voltage	9V	
Id	Drain Current	6A	
Vg	Gate Voltage	-0.45V	
Ig	Gate Current	100mA	
Pd	Power Dissipation	10W	
Pin	Input Signal Power	28dBm	
Tch	Operating Temperature	175°C	
Tm	Sintering Temperature	310°C	30s, N <sub>2</sub> protection
Tstg	Storage Temperature	-65 ~ +150°C	

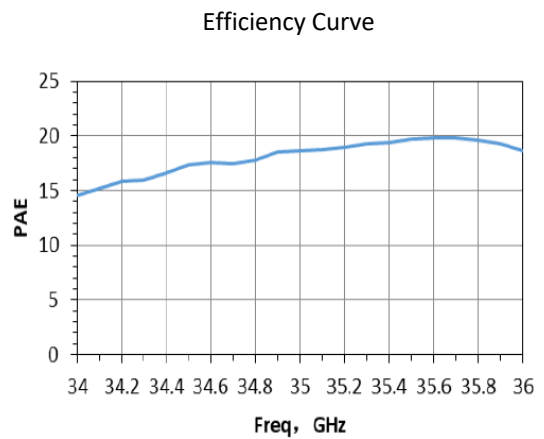
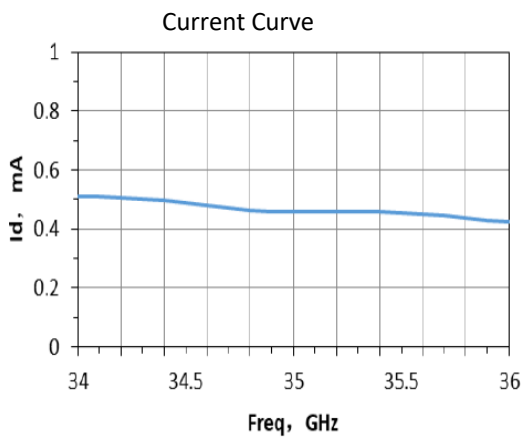
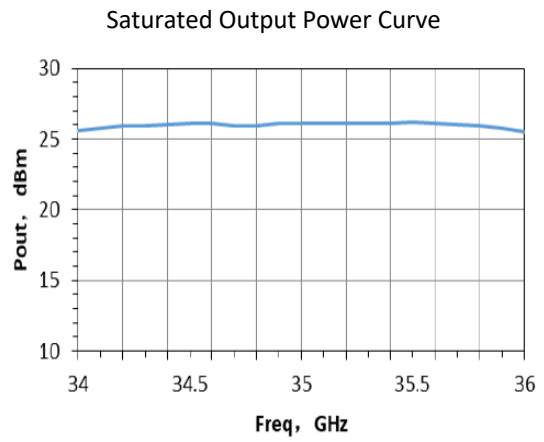
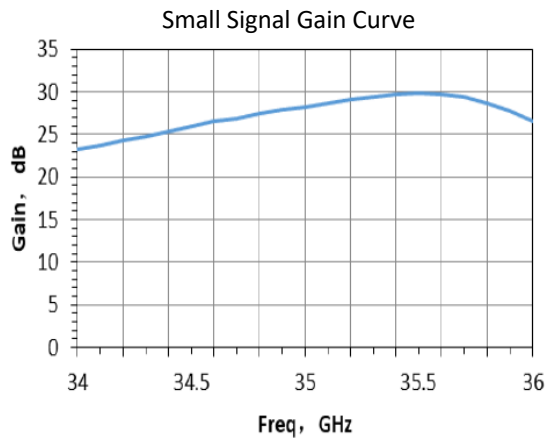
[1] Operation outside any of the Absolute Maximum Ratings may cause permanent device damage.

**Electrical Characteristics (Ta = 25°C)**

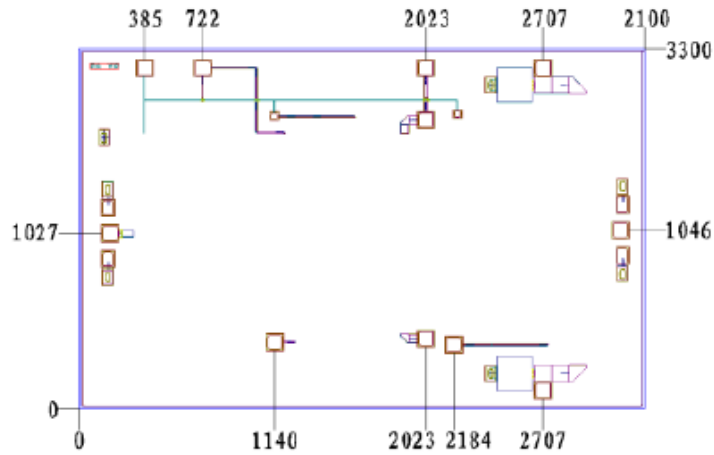
Symbol	Parameter	Test Condition	Value			Unit
			Min	Typical	Max	
G	Small Signal Gain	Vd = 5V Vg = -0.5V F : 34 ~ 36GHz	-	28	-	dB
VSWR_in	Input SW		-	2	-	
Po(sat)	Saturated Output Power		-	26	-	dBm
PAE	Power Added Efficiency		-	16	-	%
Id	Operation Current		-	0.5	-	A

Note, no CW operation.

### Typical Performance



### Chip Dimensions (Unit : $\mu\text{m}$ )



### Chip Layout Diagram

