

## Performance Characteristics:

- Frequency band: 2~18 GHz
- Saturation leakage current: 38mA
- Turn-off voltage: -0.5V
- Gain @12GHz: 12dB
- Noise factor @12GHz: 0.46dB
- $L_g \leq 0.15\mu\text{m}$ ,  $W_g = 200\mu\text{m}$
- Chip size: Length 0.45mm x width 0.36mm x thickness 0.1mm

## Product Description :

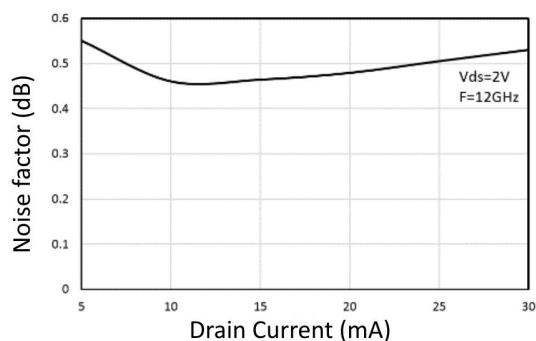
CW-FET13 is an ultra-high electron mobility transistor (GaAs field-effect transistor /HEMT chip) with frequency coverage of 2 to 18GHz, a typical 12GHz noise factor of 0.46dB, powered by +2V. It is suitable for telecommunication, satellite communication network and other low noise applications.

## Electrical parameters: ( $T_a = 25^\circ\text{C}$ )

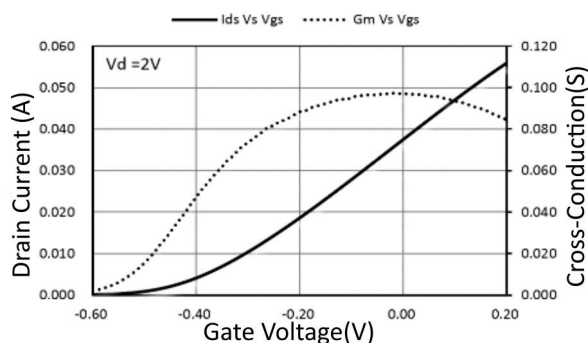
Item	Conditions	Minimum	Typical value	Maximum value	Units
Saturation current	$V_{ds}=2V$ , $V_{gs}=0V$	30	38	50	mA
transconductance	$V_{ds}=2V$ , $I_{ds}=10\text{mA}$	45	72	-	mS
Turn-off voltage	$V_{ds}=2V$ , $I_{ds}=1\text{mA}$	-0.4	-0.5	-0.6	V
Gate source breakdown	$I_{gs}=-10\mu\text{A}$	-3.0	-8	-	V
Noise factor	$V_{ds}=2V$ $I_{ds}=10\text{mA}$ @12GHz	-	0.46	0.55	dB
Gain	$V_{ds}=2V$ $I_{ds}=10\text{mA}$ @12GHz	9.0	12	-	dB

## Typical curve: ( $T_a = 25^\circ\text{C}$ )

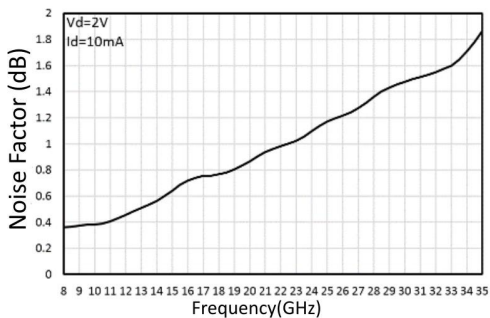
Noise factor Vs drain current



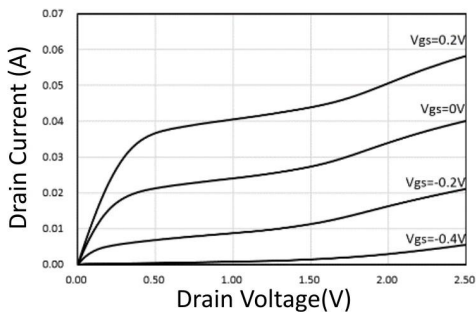
Drain current & transconductance Vs grid voltage



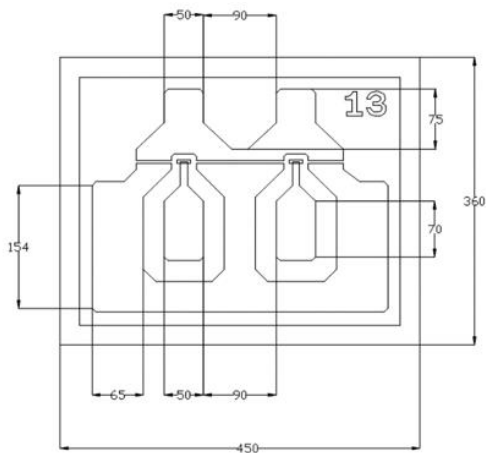
Noise factor Vs frequency



Drain current Vs drain voltage



**Size diagram: (unit μm)**



**Instructions:**

- 1) For use in a purified environment, do not touch the surface of the chip when using.
- 2) Store in a dry and nitrogen environment.