

Performance characteristics:

- Frequency band: 2~18 GHz
- Saturation leakage current: 50mA
- Turn-off voltage: -0.5V
- Gain @12GHz: 13dB
- Noise factor @12GHz: 0.5dB
- $L_g \leq 0.15\mu\text{m}$, $W_g = 280\mu\text{m}$
- Chip size: Length 0.45mm x width 0.36mm x thickness 0.1mm

Product Description:

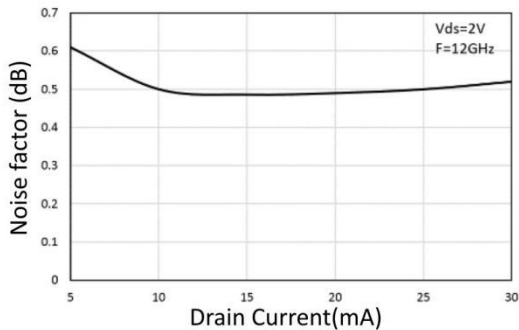
CW-FET45 is an ultra-high electron mobility transistor (GaAs field-effect transistor /HEMT chip) with a frequency coverage of 2 to 18GHz, a typical noise factor of 0.5dB for 12GHz, powered by +2V. It is suitable for telecommunication, satellite communication network and other low noise applications.

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

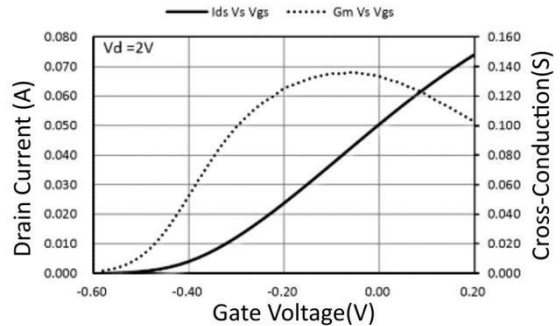
Item	Conditions	Minimum	Typical value	Maximum value	Units
Saturation current	$V_{ds}=2V, V_{gs}=0V$	40	50	60	mA
transconductance	$V_{ds}=2V, I_{ds}=10mA$	45	90	-	mS
Turn-off voltage	$V_{ds}=2V, I_{ds}=1mA$	-0.4	-0.5	-0.6	V
Gate source breakdown	$I_{gs}=-10\mu A$	-3.0	-7.5	-	V
Noise factor	$V_{ds}=2V, I_{ds}=10mA@12GHz$	-	0.5	0.65	dB
Gain	$V_{ds}=2V, I_{ds}=10mA@12GHz$	9.0	13	-	dB

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

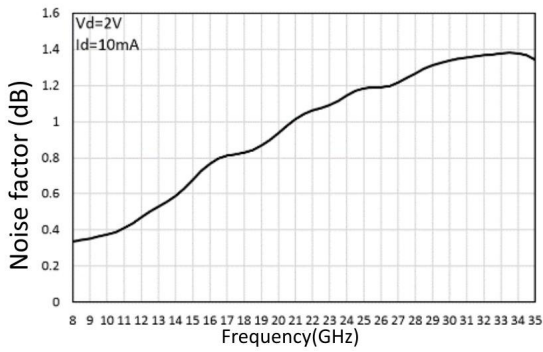
Noise factor Vs drain current



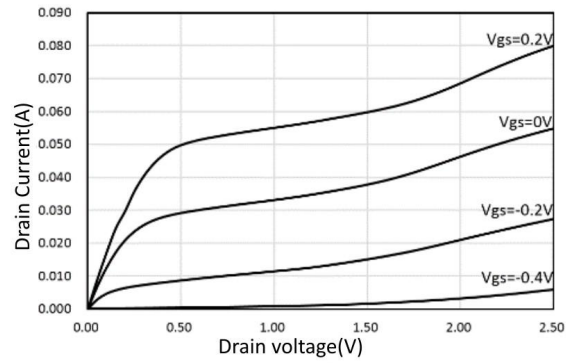
Drain current & transconductance Vs grid voltage



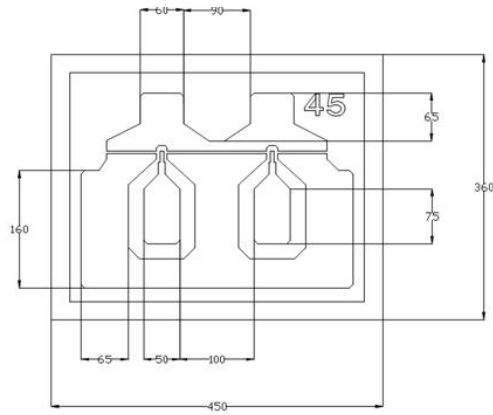
Noise factor Vs frequency



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.