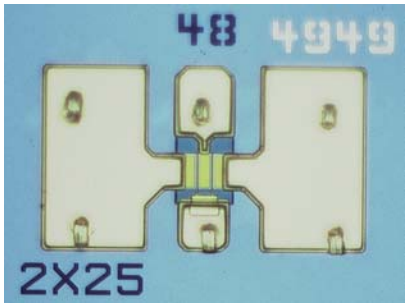
H3-50



- **InP HEMT Technology**
- **Lowest Noise Figure**
- **Wideband LNA, PA**

The H3-50 is a 50 um gate width InP HEMT transistor for HRL Laboratories 60 nm with a typical cutoff frequency (fT) of 450 GHz. This unpackaged transistor can provide the low noise figure performance for high levels of packaging integration.

Table I Specified Performance at T_A=25°C

Parameter	Units	Bias	Min	Typ	Max
Maximum Transconductance ($g_{m,max}$)	mS	Vds = 0.6 V	70	80	
Maximum Drain Current (I_{dmax})	mA	Vds = 0.6 V	35	45	
Pinch Off Voltage (V_{po})	V	Vds = 0.6 V	-1	-0.5	0
Gate Leakage ($I_{g,\ min}$)	uA	Vds = 0.0 V Vgs = -0.5		15	20

Table II Maximum Ratings at T_A=25°C

Symbol	*Parameter*	*Value*	*Note*
V_{DS}	***Drain to Source Voltage***	***0.0 to 1.0 V***	
V_{GD}	***Gate to Drain Voltage***	***-1.0 to 0.4 VDC***	
V_{GS}	***Gate to Source Voltage***	***-1.0 to 0.4 VDC***	
T_M	***Die Attach Temperature***	***200° C***	***30 Seconds maximum***

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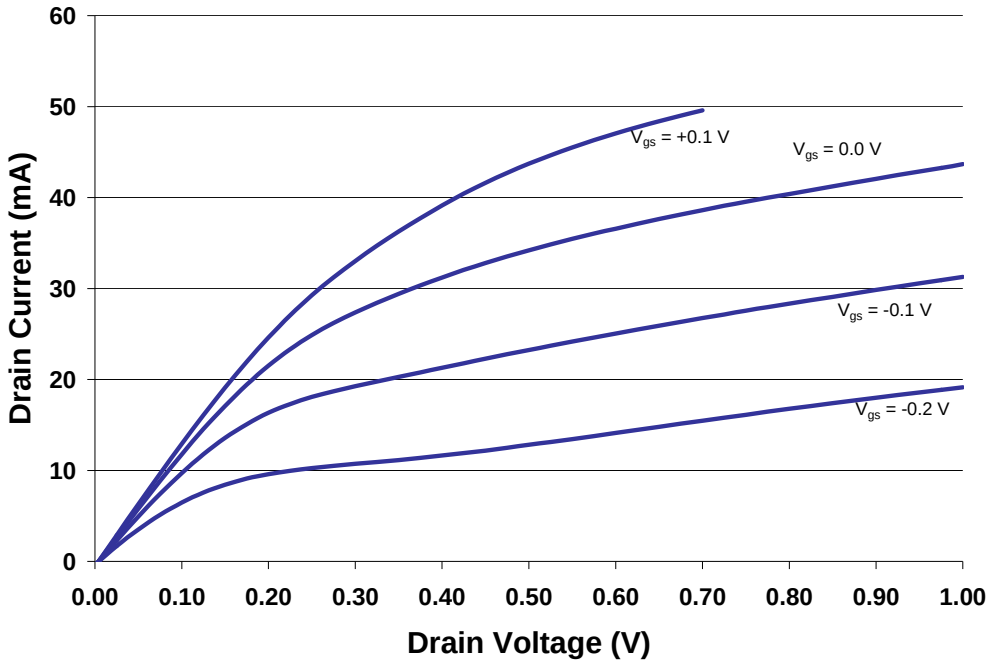
Typical DC IV Performance at T_A=25°C



Outline Drawing