

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

The H3-150 is a 150 um gate width InP HEMT transistor for HRL Laboratories 60 nm with a typical cutoff frequency (f_T) of 450 GHz. This unpackaged transistor can provide the low noise figure performance for high levels of packaging integration.

Table I Specified Performance at $T_A=25^\circ\text{C}$

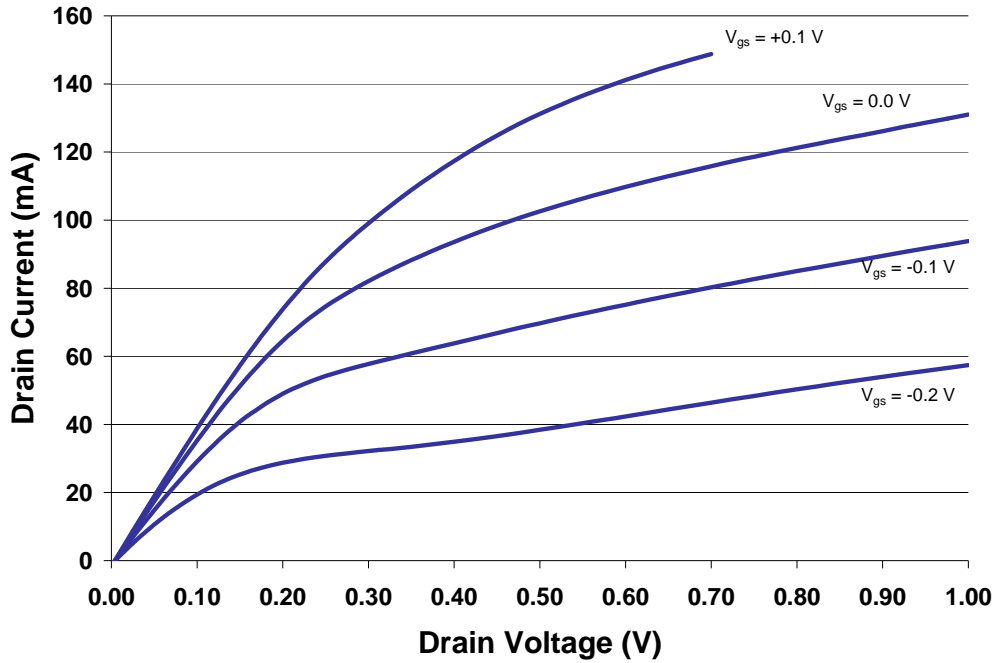
Parameter	Units	Bias	Min	Typ	Max
Maximum Transconductance ($g_{m,max}$)	mS	$V_{ds} = 0.6\text{ V}$	210	240	
Maximum Drain Current (I_{dmax})	mA	$V_{ds} = 0.6\text{ V}$	105	135	
Pinch Off Voltage (V_{po})	V	$V_{ds} = 0.6\text{ V}$	-1	-0.5	0
Gate Leakage ($I_{g, min}$)	uA	$V_{ds} = 0.0\text{ V}$ $V_{gs} = -0.5$		45	60

Table II Maximum Ratings at $T_A=25^\circ\text{C}$

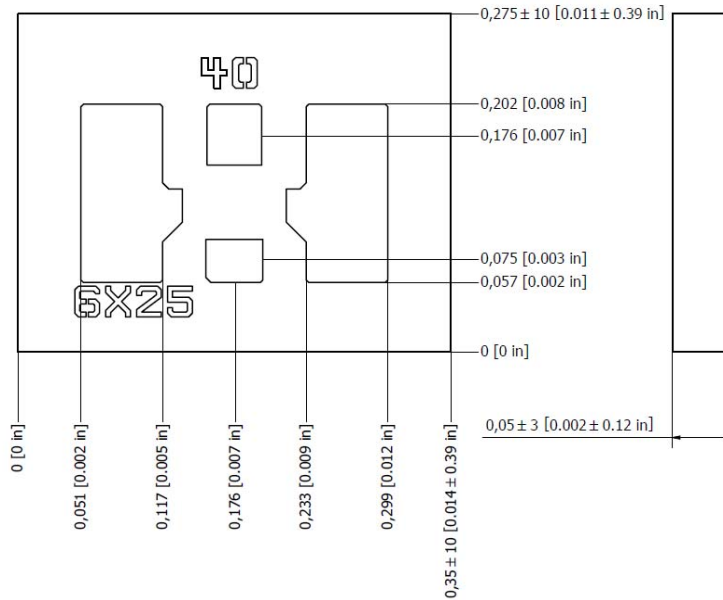
Symbol	Parameter	Value	Note
V_{DS}	Drain to Source Voltage	0.0 to 1.0 V	
V_{GD}	Gate to Drain Voltage	-1.0 to 0.4 VDC	
V_{GS}	Gate to Source Voltage	-1.0 to 0.4 VDC	
T_M	Die Attach Temperature	200° C	30 Seconds maximum

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Typical DC IV Performance at $T_A=25^\circ\text{C}$



Outline Drawing



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