

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit	
$V_{(BR)CBO}^*$	Collector – Base Breakdown Voltage	$I_C = 1\mu\text{A}$	$I_E = 0$	30	V	
$V_{(BR)CEO}$	Collector – Emitter Breakdown Voltage	$I_C = 3\text{mA}$	$I_B = 0$	15		
$V_{(BR)EBO}$	Emitter – Base Breakdown Voltage	$I_E = 10\mu\text{A}$	$I_C = 0$	2.5		
I_{CBO}	Collector – Base Cut-off Current	$V_{CB} = 15\text{V}$ $I_E = 0$	$T_A = -55^\circ\text{C}$		50	μA
					1	
$V_{CE(sat)}$	Collector – Emitter Saturation Voltage	$I_C = 10\text{mA}$			0.4	V
$V_{BE(sat)}$	Base – Emitter Saturation Voltage	$I_B = 1\text{mA}$		0.5	1	
h_{FE}	DC Current Gain	$V_{CE} = 1\text{V}$ $I_C = 3\text{mA}$	$T_A = 150^\circ\text{C}$		30	—
					10	
I_{CES}	Collector – Emitter Cut-off Current	$V_{CB} = 16\text{V}$	$I_B = 0$		100	nA
NF	Noise Figure	$V_{CE} = 6\text{V}$ $f = 450\text{MHz}$	$I_C = 1.5\text{mA}$ $R_G = 50\Omega$		4.5	dB
h_{fe}	Small Signal Current Gain	$V_{CE} = 6\text{V}$	$I_C = 2\text{mA}$	50	220	—
$ h_{fe} $	Magnitude of h_{fe}	$V_{CE} = 6\text{V}$ $f = 100\text{MHz}$	$I_C = 5\text{mA}$	10	21	—
C_{cb}	Collector – Base Feedback Capacitance	$V_{CB} = 10\text{V}$ $f = 0.1$ to 1MHz	$I_E = 0$		1	pF
G_{pe}	Small Signal Power Gain	$V_{CE} = 6\text{V}$ $f = 450\text{MHz}$	$I_C = 1.50\text{mA}$	12.5	21	dB
$r_b'C_c$	Collector – Base Time Constant	$V_{CE} = 6\text{V}$ $f = 31.9\text{MHz}$	$I_E = 2\text{mA}$	4.0	15	ps