

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit	
ELECTRICAL CHARACTERISTICS						
$V_{\text{CEO(sus)}}$	Collector – Emitter Sustaining Voltage	$I_{\text{C}} = 10\text{mA}$	90		V	
$V_{(\text{BR})\text{CBO}}$	Collector – Base Breakdown Voltage	$I_{\text{C}} = 1\text{mA}$	180			
$V_{(\text{BR})\text{EBO}}$	Emitter – Base Breakdown Voltage	$I_{\text{E}} = 1\text{mA}$	10			
I_{CBO}	Collector Cut-Off Current	$V_{\text{CB}} = 180\text{V}$		10	μA	
			$T_{\text{C}} = 125^{\circ}\text{C}$			100
I_{CEO}	Collector Cut-Off Current	$I_{\text{B}} = 0$	$V_{\text{CE}} = 80\text{V}$	100	μA	
I_{EBO}	Emitter Cut-Off Current	$I_{\text{C}} = 0$	$V_{\text{EB}} = 9\text{V}$		10	
				$T_{\text{C}} = 125^{\circ}\text{C}$		100
h_{FE^*}	DC Current Gain	$I_{\text{C}} = 0.3\text{A}$	$V_{\text{CE}} = 4\text{V}$	30	80	
		$I_{\text{C}} = 3\text{A}$	$V_{\text{CE}} = 4\text{V}$	25	60	
		$I_{\text{C}} = 5\text{A}$	$V_{\text{CE}} = 4\text{V}$ $T_{\text{C}} = 125^{\circ}\text{C}$	20	50	
$V_{\text{CE(sat)}^*}$	Collector – Emitter Saturation Voltage	$I_{\text{C}} = 1\text{A}$	$I_{\text{B}} = 0.1\text{A}$		0.2	
		$I_{\text{C}} = 3\text{A}$	$I_{\text{B}} = 0.3\text{A}$		0.6	
		$I_{\text{C}} = 6\text{A}$	$I_{\text{B}} = 0.6\text{A}$		1.5	
$V_{\text{BE(sat)}^*}$	Base – Emitter Saturation Voltage	$I_{\text{C}} = 3\text{A}$	$I_{\text{B}} = 0.3\text{A}$		1.1	
		$I_{\text{C}} = 6\text{A}$	$I_{\text{B}} = 0.5\text{A}$		2.0	
DYNAMIC CHARACTERISTICS						
f_{t}	Transition Frequency	$I_{\text{C}} = 0.2\text{A}$	$V_{\text{CE}} = 4\text{V}$		20	MHz
C_{ob}	Output Capacitance	$V_{\text{CB}} = 20\text{V}$	$f = 1\text{MHz}$		44	pF

* Pulse test $t_{\text{p}} = 300\mu\text{s}$, $\delta < 2\%$



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