

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
OFF CHARACTERISTICS					
$V_{(BR)CEO}$	Collector Emitter Breakdown Voltage ¹	$I_C = 100\text{mA}$	$I_B = 0$	80	V
I_{CEX}	Collector Cutoff Current	$V_{CE} = 100\text{V}$	$V_{BE} = 1.5\text{V}$		100
		$V_{CE} = 70\text{V}$	$V_{BE} = 1.5\text{V}$		1.0
			$T_A = 150^\circ\text{C}$		
I_{EBO}	Emitter Base Cutoff Current	$V_{EB} = 6\text{V}$	$I_C = 0$		0.75
I_{CEO}	Collector Emitter Cutoff Current	$V_{CE} = 80\text{V}$	$I_B = 0$		0.7
I_{CBO}	Collector Base Cutoff Current	$V_{CB} = 100\text{V}$	$I_E = 0$		0.1
ON CHARACTERISTICS					
h_{FE}	DC Current Gain	$I_C = 50\text{mA}$	$V_{CE} = 5\text{V}$	30	
		$I_C = 500\text{mA}$	$V_{CE} = 5\text{V}$	40	160
		$I_C = 1.0\text{A}$	$V_{CE} = 10\text{V}$	20	
$V_{CE(sat)}$	Collector Emitter Saturation Voltage	$I_C = 1.0\text{A}$	$I_B = 0.1\text{A}$		2.5
V_{BE}	Base Emitter Voltage	$I_C = 1.0\text{A}$	$V_{CE} = 10\text{V}$		1.5
TRANSIENT CHARACTERISTICS					
f_T	Transistion Frequency	$V_{CE} = 10\text{V}$	$I_C = 500\text{mA}$ $f = 10\text{MHz}$		10
C_{OB}	Common Base Output Capacitance	$V_{CB} = 10\text{V}$	$I_C = 0\text{A}$ $f = 100\text{KHz}$		50
h_{fe}	Small Signal Current Gain	$V_{CE} = 10\text{V}$	$I_C = 100\text{mA}$ $f = 1.0\text{kHz}$	40	

- 1) Pulse test : Pulse Width < 100 μs ,Duty Cycle <1%
- 2) f_t is defined as the frequency at which $|h_{fe}|$ extrapolates to unity.

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