

SILICON EPIBASE PNP DARLINGTON TRANSISTOR BDS21

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

Symbols	Parameters	Test Conditions	Min.	Typ	Max.	Units
I_{CBO}	Collector-Cut-Off Current	$V_{CB} = -80\text{V}$ $I_E = 0$			-0.2	mA
		$V_{CB} = -60\text{V}$ $I_E = 0$			-1.0	
		$T_C = 150^\circ\text{C}$				
I_{CEO}	Collector-Cut-Off Current	$V_{CE} = -40\text{V}$ $I_B = 0$			-0.5	
I_{EBO}	Emitter-Cut-Off Current	$V_{EB} = -5\text{V}$ $I_C = 0$			-2	
$h_{FE}^{(1)}$	Forward-current transfer ratio	$I_C = -0.5\text{A}$ $V_{CE} = -3\text{V}$	1000			
		$I_C = -3\text{A}$ $V_{CE} = -3\text{V}$	1000			
$V_{CE(sat)}^{(1)}$	Collector-Emitter Saturation Voltage	$I_C = -3\text{A}$ $I_B = -12\text{mA}$			-2	V
		$I_C = -5\text{A}$ $I_B = -20\text{mA}$			-4	
$V_{BE(sat)}^{(1)}$	Base-Emitter Saturation Voltage	$I_C = -5\text{A}$ $I_B = -20\text{mA}$			-2.8	
$V_{BE(on)}^{(1)}$	Base-Emitter On Voltage	$I_C = -3\text{A}$ $V_{CE} = -3\text{V}$			-3.5	

DYNAMIC CHARACTERISTICS

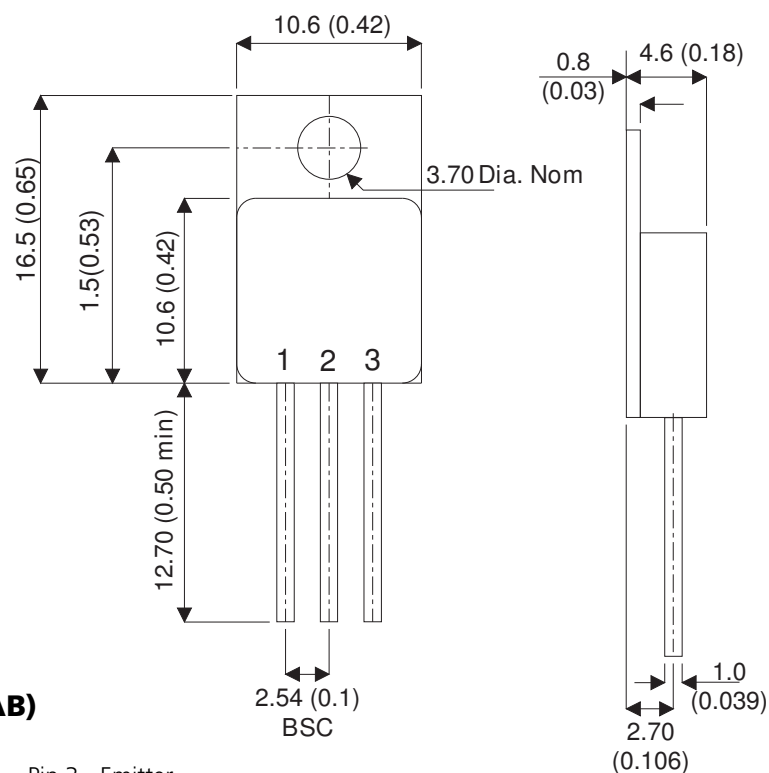
f_T	Transition Frequency	$I_C = -0.5\text{A}$ $V_{CE} = -4\text{V}$ $f = 2\text{MHz}$	8			MHz
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Notes

(1) Pulse Width $\leq 300\mu\text{s}$, $\delta \leq 2\%$

MECHANICAL DATA

Dimensions in mm (inches)



TO220M(TO-257AB)

Pin 1 – Base

Pin 2 – Collector

Pin 3 - Emitter