

PNP DARLINGTON SILICON POWER TRANSISTOR BDX 66, A, B, C

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

Symbols	Parameters	Test Conditions		Min.	Typ.	Max.	Units	
$V_{(BR)CEO}^{(1)}$	Collector-Emitter Breakdown Voltage	$I_C = -100\text{mA}$		BDX66	-60		V	
				BDX66A	-80			
				BDX66B	-100			
				BDX66C	-120			
I_{CEO}	Collector Cut-Off Current	$V_{CE} = 0.5 \times V_{CEO(\text{max})}$	$I_B = 0$			-1.0	mA	
I_{CBO}	Collector-Base Cut-Off Current	$I_E = 0 \quad V_{CB} = V_{CBO(\text{max})}$				-1.0		
		$I_E = 0$	$V_{CB} = -40\text{V}$	BDX66		-5		
			$V_{CB} = -50\text{V}$	BDX66A				
			$V_{CB} = -60\text{V}$	BDX66B				
			$V_{CB} = -70\text{V}$	BDX66C				
		$T_J = 200^\circ\text{C}$						
I_{EBO}	Emitter Cut-Off Current	$V_{EB} = -5\text{V}$	$I_C = 0$			-5		
$V_{CE(\text{sat})}^{(1)}$	Collector-Emitter Saturation Voltage	$I_C = -10\text{A}$		$I_B = -40\text{mA}$			-2	V
$V_{BE}^{(1)}$	Base-Emitter Voltage	$I_C = -10\text{A}$		$V_{CE} = -3\text{V}$			-2.5	
V_F	Diode Forward Voltage	$I_F = 10\text{A}$				2		
$h_{FE}^{(1)}$	Forward-current transfer ratio	$V_{CE} = -3\text{V}$		$I_C = -1.0\text{A}$		2000	-	
				$I_C = -10\text{A}$	1000			
				$I_C = -16\text{A}$		1000		

DYNAMIC CHARACTERISTICS

$ h_{fe} $	Magnitude of common emitter small-signal short-circuit forward current transfer ratio	$I_C = -5\text{A}$ $f = 1.0\text{MHz}$	$V_{CE} = -3\text{V}$			50		-
C_{obo}	Output Capacitance	$V_{CB} = -10\text{V}$ $f = 1.0\text{MHz}$	$I_E = 0$			300		pF
t_{on}	Turn-On Time	$I_C = -10\text{A}$	$V_{CC} = -12\text{V}$			1.0		μs
t_{off}	Turn-Off Time	$-I_{B1} = I_{B2} = 40\text{mA}$				3.5		

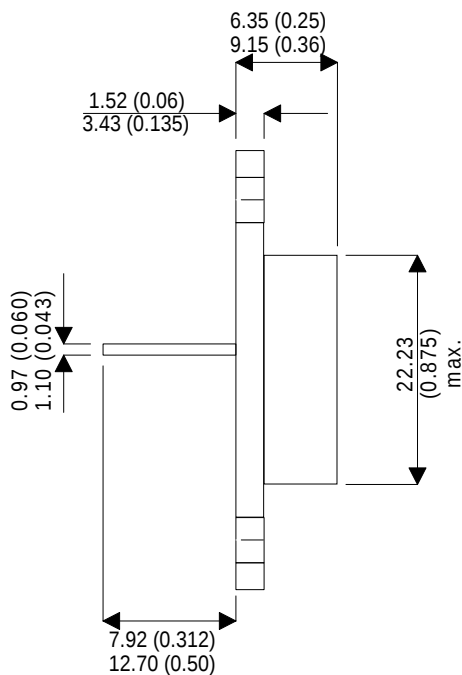
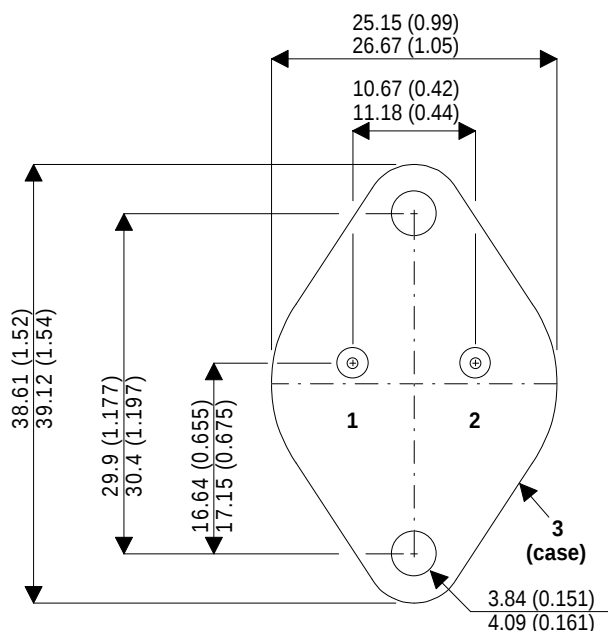
Notes

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

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MECHANICAL DATA

Dimensions in mm (inches)



TO-3 (TO-204AA)

Pin 1 – Base Pin 2 – Emitter Case – Collector