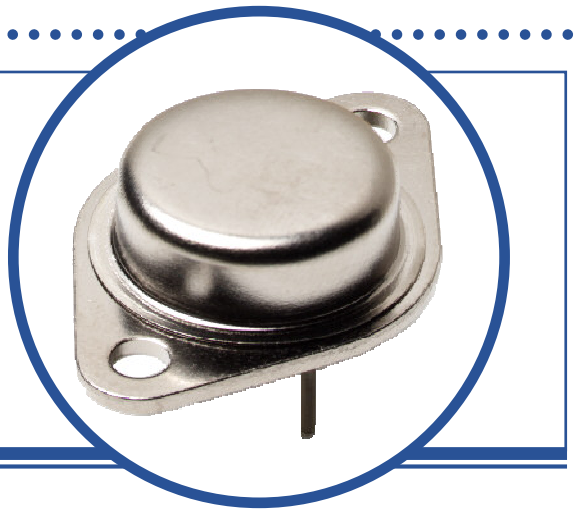
PNP DARLINGTON SILICON POWER TRANSISTOR

TT electronics
Semelab Limited

BDX 66, A, B, C

- Hermetic Metal TO3 Package.
- Ideal for General Purpose Low Frequency Switching Applications
- Screening Options Available



ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise stated)

		BDX66	66A	66B	66C
V_{CEO}	Collector – Emitter Voltage	-60V	-80V	-100V	-120V
V_{CBO}	Collector – Base Voltage	-60V	-80V	-100V	-120V
V_{EBO}	Emitter – Base Voltage	-5V			
I_{CM}	Peak Collector Current	-20A			
I_B	Base Current	-0.25A			
P_D	Total Power Dissipation at T_C = 25°C	150W			
	De-rate Linearly Above 25°C	0.855 W/°C			
T_J	Junction Temperature Range	-55 to +200°C			
T_{stg}	Storage Temperature Range	-55 to +200°C			

THERMAL PROPERTIES

Symbols	Parameters	Max.	Units
$R_{\theta JC}$	Thermal Resistance, Junction To Case	1.17	°C/W

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ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise stated)

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

DYNAMIC CHARACTERISTICS

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

Notes
(1) Pulse Width ≤ 300us, δ ≤ 2%

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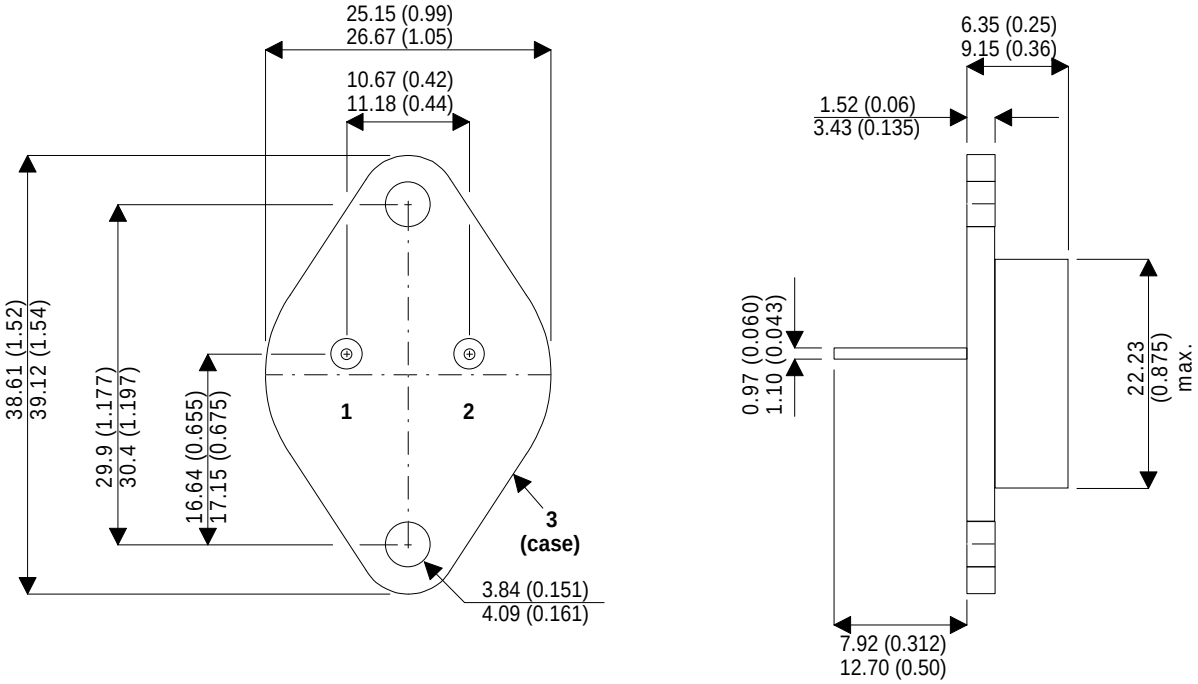
MECHANICAL DATA

Dimensions in mm (inches)



TO-3 (TO-204AA)

Pin 1 – Base Pin 2 – Emitter Case – Collector