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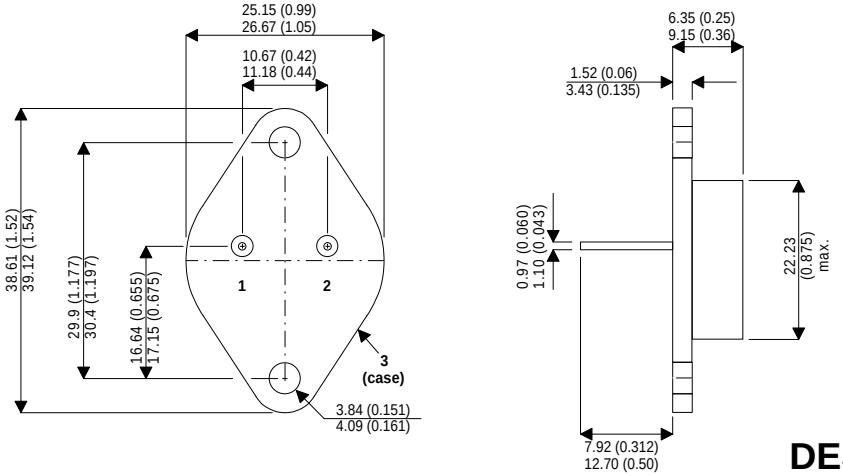
MECHANICAL DATA
Dimensions in mm (inches)



TO-3 (TO-204AA)
Pin 1 – Base Pin 2 – Emitter Case – Collector

PNP DARLINGTON SILICON POWER TRANSISTOR

V_{CEO} = 100V
I_C = 12A
P_D = 150W

DESCRIPTION

A hermetic TO3 packaged silicon power Darlington transistor designed for general purpose amplifier and low frequency switching applications.
Hi-Reliability screening options available.

ABSOLUTE MAXIMUM RATINGS T_{CASE} = 25℃ unless otherwise stated

V_{CBO}	Collector - Base Voltage		-100V
V_{CEO}	Collector - Emitter Voltage (I_B = 0)		-100V
V_{EBO}	Emitter – Base Voltage (I_C = 0)		-5.0V
I_C	Continuous Collector Current		-12.0A
I_B	Base Current		-0.2A
P_{tot}	Total Power Dissipation at	T_{case} = 25℃	150W
	De-rate Linearly	T_{case} > 25℃	0.855W/℃
T_j, T_{stg}	Operating and Storage Temperature Range		-65 to +200℃

THERMAL CHARACTERISTICS

$R_{\theta JC}$	Thermal Resistance Junction - Case	Max	1.17	℃/W

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ELECTRICAL CHARACTERISTICS (T_{case}=25℃ unless otherwise stated)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)CEO}$*	Collector-Emitter Breakdown Voltage	I_B = 0	I_C = -10mA	-100	-	-	V
I_{CEO}	Collector-Emitter Cut-Off Current	I_B = 0	V_{CE} = -50V	-	-	-1.0	mA
I_{CEX}	Collector-Emitter Cut-Off Current	V_{BE} = 1.5V	V_{CE} = -100V	-	-	-0.5	
			T_C = 150℃	-	-	-5.0	
I_{EBO}	Emitter-Base Cut-Off Current	I_C = 0	V_{EB} = -5.0V	-	-	-2.0	
h_{FE}*	DC Current Gain	I_C = -6A	V_{CE} = -3.0V	750	-	12000	
			T_C = -55℃	300	-	-	
		I_C = -12A	V_{CE} = -3.0V	100	-	-	
$V_{CE(sat)}$*	Collector-Emitter Saturation Voltage	I_C = -12A	I_B = -120mA	-	-	-3.0	V
		I_C = -6A	I_B = -24mA	-	-	-2.0	
$V_{BE(sat)}$*	Base-Emitter Saturation Voltage	I_C = -12.0A	I_B = -120mA	-	-	-4.0	
$V_{BE(on)}$*	Base-Emitter On Voltage	I_C = -6A	V_{CE} = -3.0V	-	-	-2.8	

DYNAMIC CHARACTERISTICS (T_{case}=25℃ unless otherwise stated)

f_T†	Transition Frequency	I_C = -5A f = 1.0MHz	V_{CE} = -3.0V	4.0	-	-	MHz
C_{OBO}	Output Capacitance	I_E = 0 f = 1.0MHz	V_{CB} = -10V	-	-	300	pF
h_{fe}	Small Signal Current Gain	I_C = -0.8A f = 1.0KHz	V_{CE} = -3.0V	1000	-	-	

* Pulse test t_p = 380μs, δ < 2%
† Parameter verified by design only

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