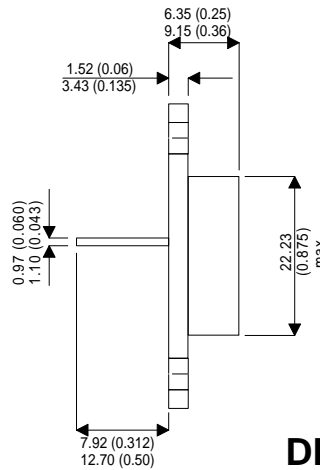
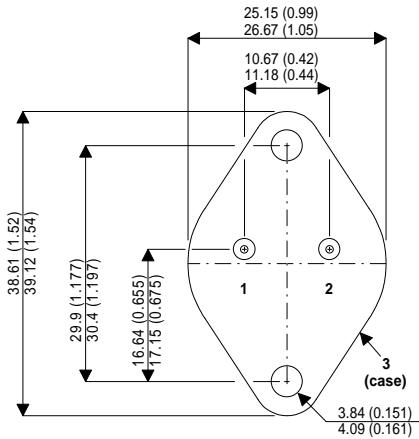


MECHANICAL DATA

Dimensions in mm (inches)



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.

TO-3 (TO-204AA)

Pin 1 – Base Pin 2 – Emitter Case – Collector

ABSOLUTE MAXIMUM RATINGS $T_{CASE} = 25^{\circ}C$ 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 $T_{case} = 25^{\circ}C$	150W
	De-rate Linearly $T_{case} > 25^{\circ}C$	0.855W/ $^{\circ}C$
T_j, T_{stg}	Operating and Storage Temperature Range	-65 to +200 $^{\circ}C$

THERMAL CHARACTERISTICS

$R_{\theta JC}$	Thermal Resistance Junction - Case	Max	1.17	$^{\circ}C/W$
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ELECTRICAL CHARACTERISTICS (T_{case}=25°C 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°C	-	-	-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°C	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°C unless otherwise stated)

f _T [†]	Transition Frequency	I _C = -5A V _{CE} = -3.0V f = 1.0MHz	4.0	-	-	MHz
C _{OBO}	Output Capacitance	I _E = 0 V _{CB} = -10V f = 1.0MHz	-	-	300	pF
h _{fe}	Small Signal Current Gain	I _C = -0.8A V _{CE} = -3.0V f = 1.0KHz	1000	-	-	

* Pulse test t_p = 380μs, δ < 2%

† Parameter verified by design only

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