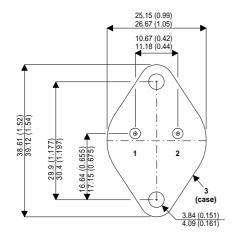
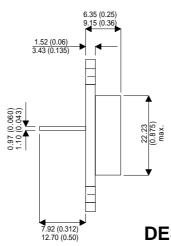




MECHANICAL DATA

Dimensions in mm (inches)





PNP DARLINGTON SILICON POWER TRANSISTOR

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

DESCRIPTION

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

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		
$V_{\sf CEO}$	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 _{BJC} Thermal Resistance Junction - Case	Max	1.17	.c\M
---	-----	------	------

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612.

DOC 8026, ISSUE 1





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

Symbol	Parameter	Test Conditions		Min.	Тур.	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	
	Collector-Emitter Cut-Off Current	$V_{BE} = 1.5V$	$V_{CE} = -100V$	-	-	-0.5]
I _{CEX}			T _C = 150℃	-	-	-5.0	mA
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	
		I _C = -6A	$I_B = -24mA$	-	-	-2.0	V
V _{BE(sat)} *	Base-Emitter Saturation Voltage	I _C = -12.0A	I _B = -120mA	-	-	-4.0	V
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)

		I _C = -5A	$V_{CE} = -3.0V$				
f _T [†]	Transition Frequency	10 - 3/4	v CE - 0.0 v	4.0	_	-	MHz
		f = 1.0MHz					
Сово	Output Capacitance	I _E = 0	$V_{CB} = -10V$		-	300	pF
		f = 1.0MHz		-			
h _{fe}	Small Signal Current Gain	$I_{\rm C} = -0.8A$	$V_{CE} = -3.0V$	1000		-	
		f = 1.0KHz		1000	-		

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612. E-mail: sales@semelab.co.uk Website: http://www.semelab.co.uk

^{*} Pulse test t_p = 380 μ s, δ < 2% † Parameter verified by design only