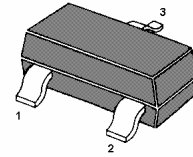


NPN Darlington Transistors

for preamplifier input applications



1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	30	V
Collector Emitter Voltage	V_{CEO}	30	V
Emitter Base Voltage	V_{EBO}	10	V
Collector Current	I_C	300	mA
Typical Thermal Resistance ¹⁾	$R_{\theta JA}$	556	$^\circ\text{C/W}$
Total Power Dissipation	P_{tot}	225	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_S	- 55 to + 150	$^\circ\text{C}$

¹⁾ Thermal resistance from junction to ambient at P.C.B. mounted

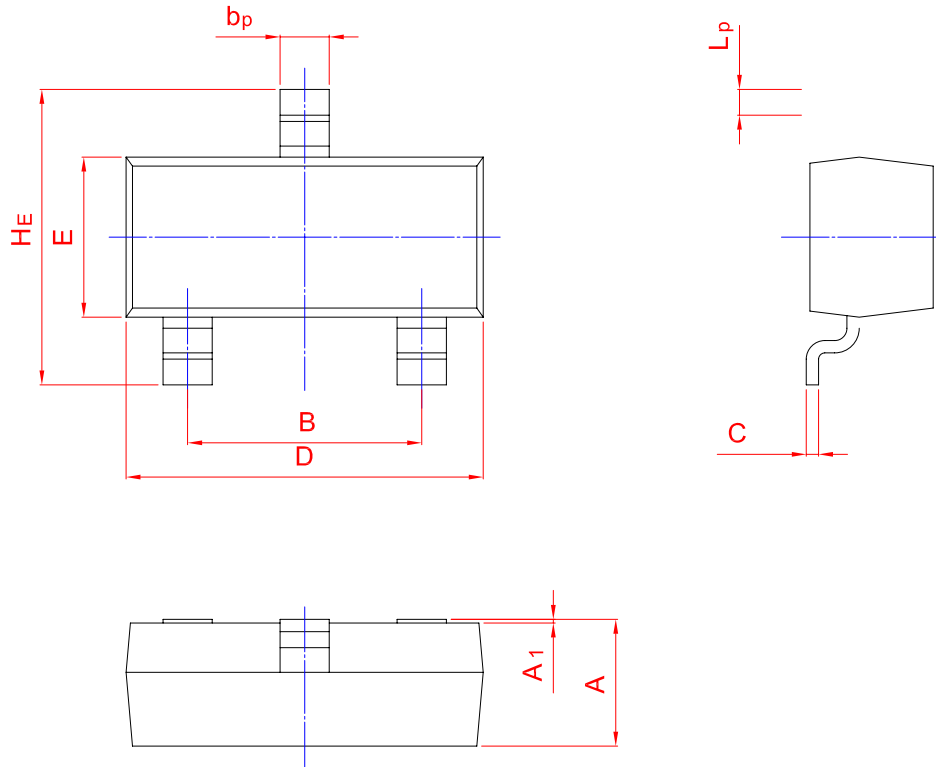
Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain	h_{FE}				
at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$	h_{FE}	10000	-	-	-
at $V_{CE} = 5\text{ V}$, $I_C = 100\text{ mA}$	h_{FE}	20000	-	-	-
Collector Cutoff Current	I_{CBO}				
at $V_{CB} = 30\text{ V}$	I_{CBO}	-	-	100	nA
Collector Emitter Breakdown Voltage	$V_{(BR)CEO}$				
at $I_C = 10\text{ mA}$	$V_{(BR)CEO}$	30	-	-	V
Collector Emitter Saturation Voltage	$V_{CE(sat)}$				
at $I_C = 100\text{ mA}$, $I_B = 0.1\text{ mA}$	$V_{CE(sat)}$	-	-	1.5	V
Base Emitter On-state Voltage	$V_{BE(on)}$				
at $I_C = 100\text{ mA}$, $V_{CE} = 5\text{ V}$	$V_{BE(on)}$	-	-	2.0	V
Transition Frequency	f_T				
at $V_{CE} = 5\text{ V}$, $I_C = 50\text{ mA}$, $f = 100\text{ MHz}$	f_T	125	-	-	MHz

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b_p	C	D	E	H_E	A_1	L_p
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20

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