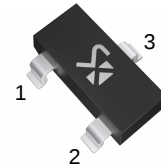


NPN Darlington Transistors

for preamplifier input applications



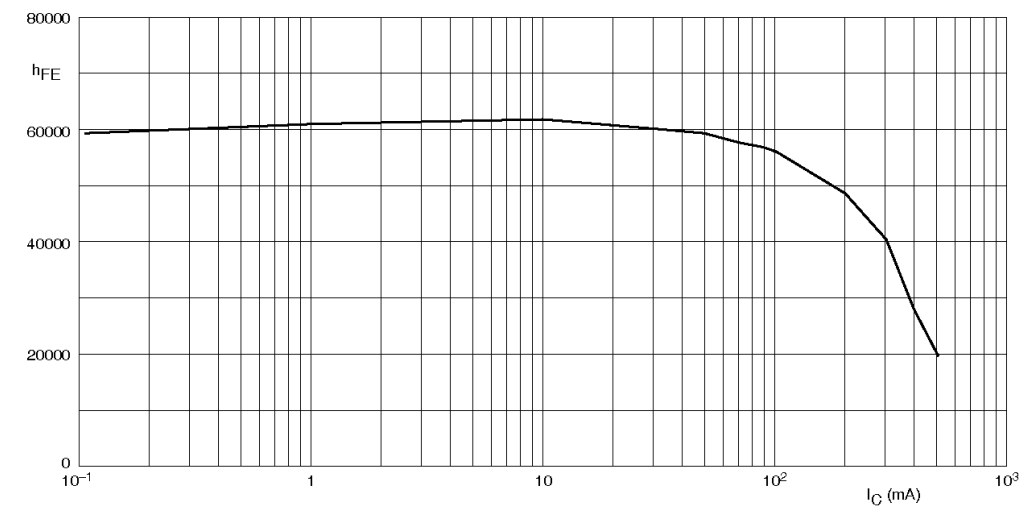
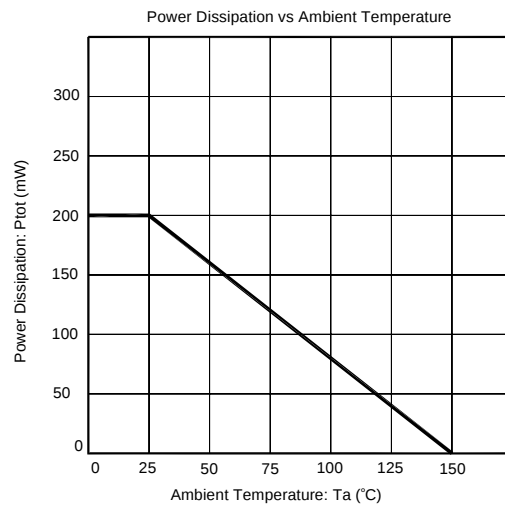
1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	40 80	V
Collector Emitter Voltage	V_{CEO}	30 60	V
Emitter Base Voltage	V_{EBO}	10	V
Collector Current	I_C	500	mA
Peak Collector Current	I_{CM}	800	mA
Base Current	I_B	100	mA
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_s	- 65 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 5\text{ V}$, $I_C = 1\text{ mA}$	h_{FE}	4000	-	-	-
at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$	h_{FE}	2000	-	-	-
at $V_{CE} = 5\text{ V}$, $I_C = 100\text{ mA}$	h_{FE}	10000	-	-	-
Collector Cutoff Current at $V_{CB} = 30\text{ V}$	I_{CBO}	-	-	100	nA
at $V_{CB} = 60\text{ V}$	I_{CBO}	-	-	100	nA
Emitter Cutoff Current at $V_{EB} = 10\text{ V}$	I_{EBO}	-	-	100	nA
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	40 80	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 10\text{ mA}$	$V_{(BR)CEO}$	30 60	-	-	V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	10	-	-	V
Collector Emitter Saturation Voltage at $I_C = 100\text{ mA}$, $I_B = 0.1\text{ mA}$	$V_{CE(sat)}$	-	-	1	V
Base Emitter Saturation Voltage at $I_C = 100\text{ mA}$, $I_B = 0.1\text{ mA}$	$V_{BE(sat)}$	-	-	1.5	V
Base Emitter On-state Voltage at $I_C = 10\text{ mA}$, $V_{CE} = 5\text{ V}$	$V_{BE(on)}$	-	-	1.4	V
Transition Frequency at $V_{CE} = 5\text{ V}$, $I_C = 30\text{ mA}$, $f = 100\text{ MHz}$	f_T	-	220	-	MHz



$V_{CE} = 2\text{ V.}$

DC current gain; typical values.

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23

