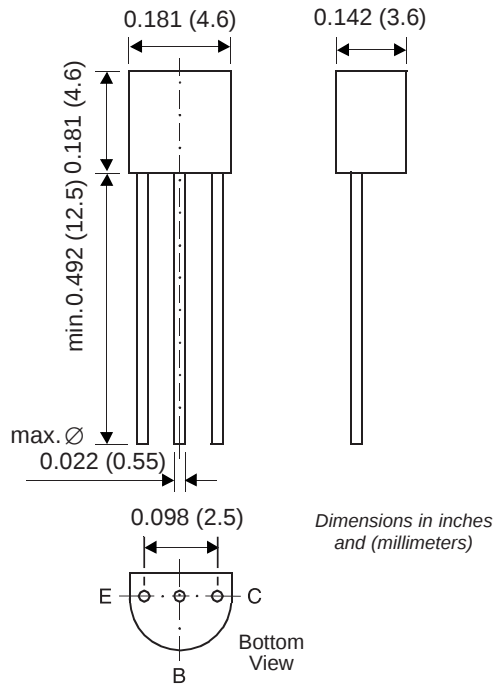


Small Signal Transistor (NPN)

TO-226AA (TO-92)



Features

- NPN Silicon Epitaxial Transistor for switching and amplifier applications.
- Especially suitable for AF-driver and low-power output stages.
- As complementary type, the PNP transistor 2N4126 is recommended.

Mechanical Data

Case: TO-92 Plastic Package

Weight: approx. 0.18g

Packaging Codes/Options:

E6/Bulk – 5K per container, 20K/box

E7/4K per Ammo mag., 20K/box

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	25	V
Collector-Base Voltage	V_{CBO}	30	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	200	mA
Peak Collector Current	I_{CM}	800	mA
Base Current	I_B	50	mA
Power Dissipation at $T_{amb} = 25^\circ\text{C}$	P_{tot}	625 ⁽¹⁾	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	200 ⁽¹⁾	$^\circ\text{C/W}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_S	-65 to +150	$^\circ\text{C}$

Note: (1) Valid provided that leads at a distance of 2mm from case are kept at ambient temperature.

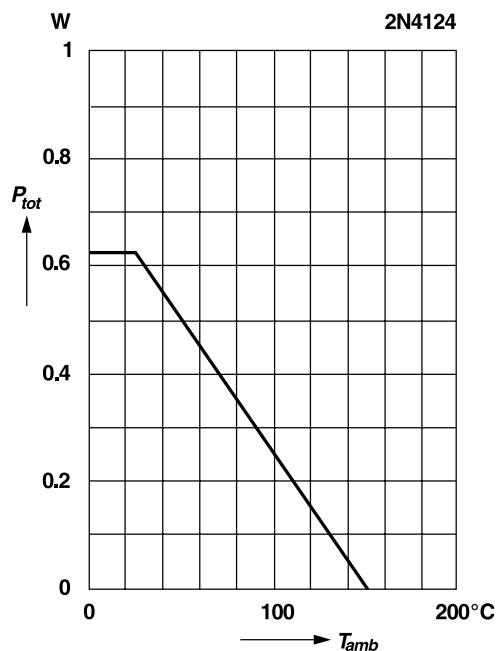
Electrical Characteristics ($T_J = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
DC Current Gain	h_{FE}	$V_{CE} = 1\text{ V}$, $I_C = 2.0\text{ mA}$ $V_{CE} = 1\text{ V}$, $I_C = 50\text{ mA}$	120 —	— 60	360 —	—
Collector-Base Cutoff Current	I_{CBO}	$V_{CB} = 20\text{ V}$	—	—	50	nA
Emitter-Base Cutoff Current	I_{EBO}	$V_{EB} = 3\text{ V}$	—	—	50	nA
Collector Saturation Voltage	V_{CEsat}	$I_C = 50\text{ mA}$, $I_B = 5\text{ mA}$	—	—	0.3	V
Base Saturation Voltage	V_{BEsat}	$I_C = 50\text{ mA}$, $I_B = 5\text{ mA}$	—	—	0.95	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{ mA}$	25	—	—	V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\text{ }\mu\text{A}$	30	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\text{ }\mu\text{A}$	5	—	—	V
Gain-Bandwidth Product	f_T	$V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$ $f = 50\text{ MHz}$	—	200	—	MHz
Collector-Base Capacitance	C_{CBO}	$V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	—	12	—	pF

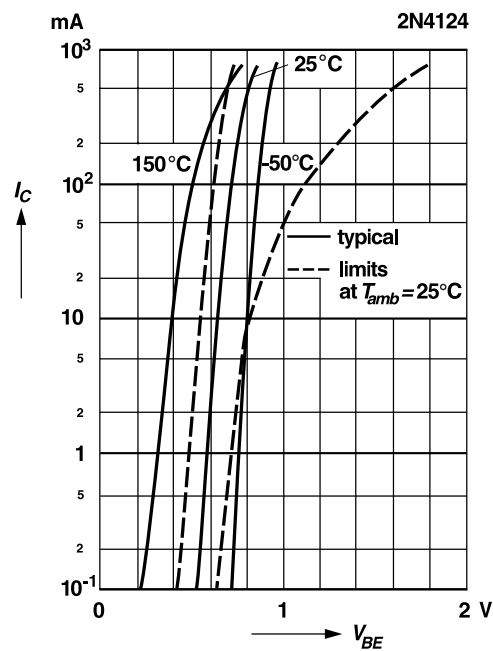
Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Admissible power dissipation versus ambient temperature

Valid provided that leads are kept at ambient temperature
at a distance of 2 mm from case



Collector current versus base-emitter voltage

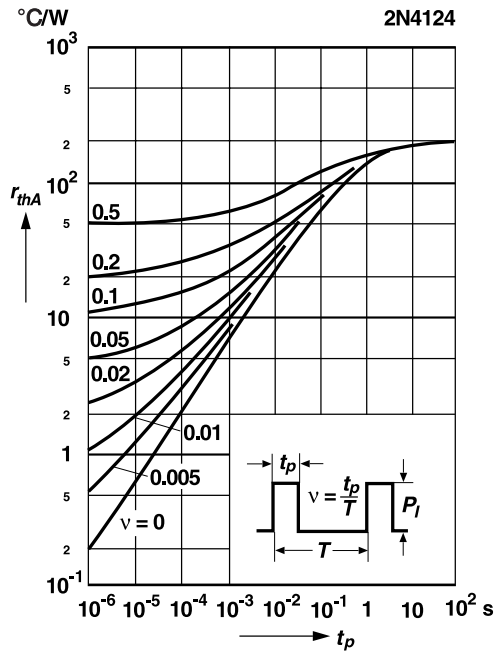




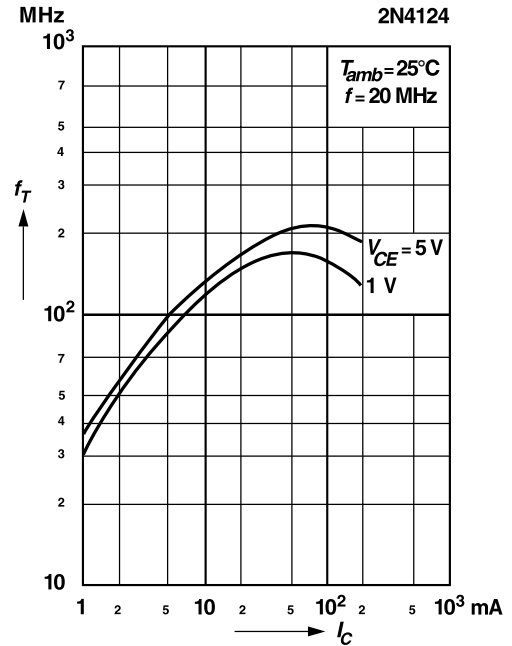
Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Pulse thermal resistance versus pulse duration

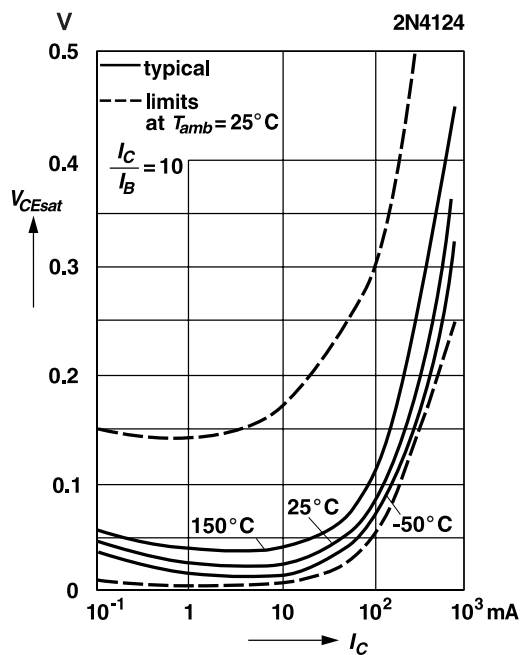
Valid provided that leads are kept at ambient temperature
at a distance of 2 mm from case



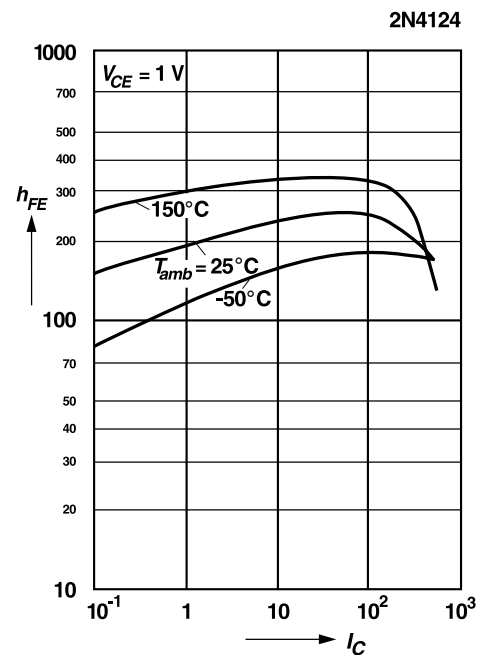
Gain-bandwidth product versus collector current



Collector saturation voltage versus collector current



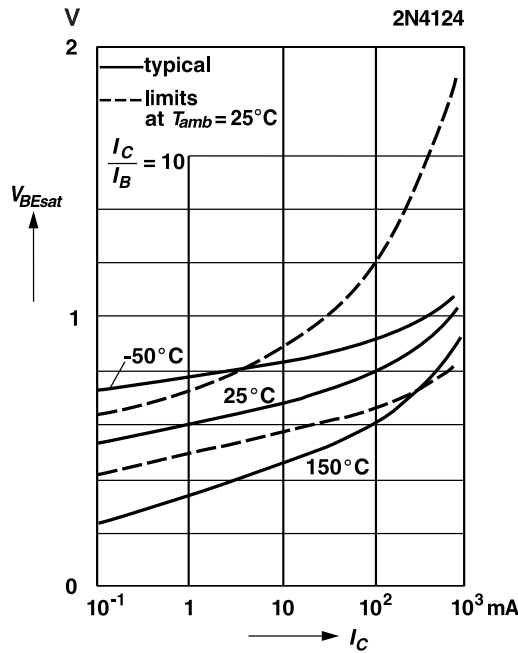
DC current gain versus collector current



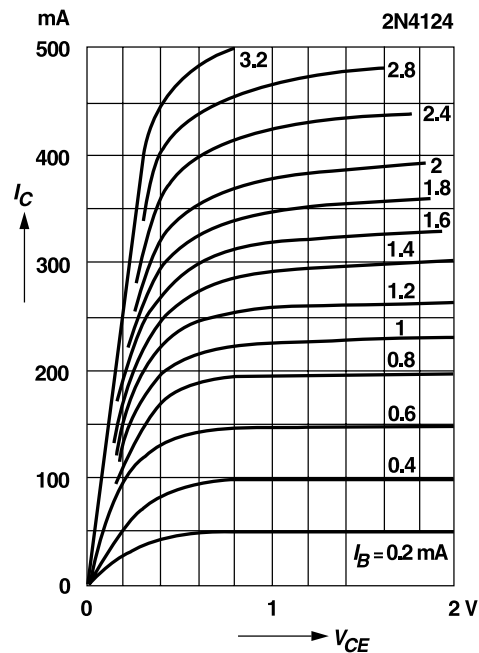


Ratings and
Characteristic Curves (T_A = 25°C unless otherwise noted)

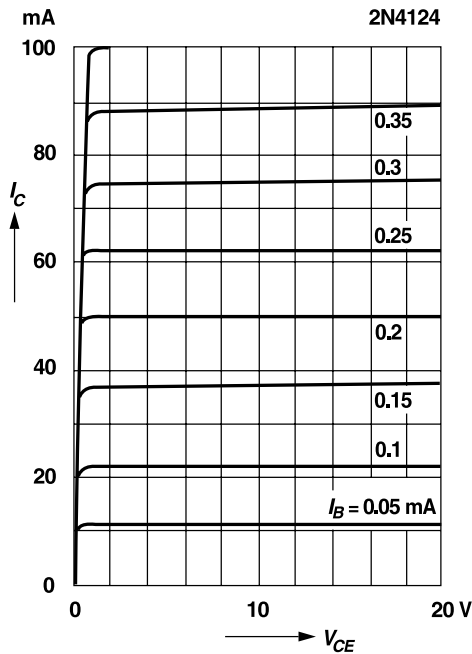
Base saturation voltage
versus collector current



Common emitter
collector characteristics



Common emitter
collector characteristics



Common emitter
collector characteristics

