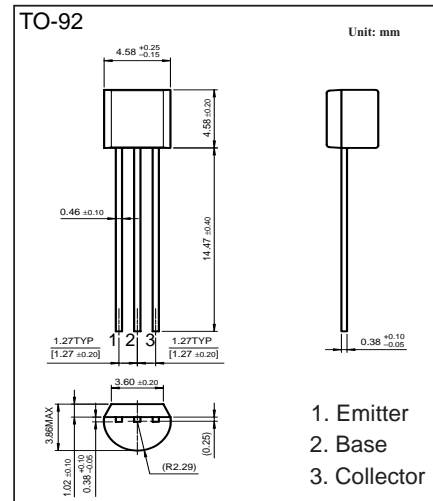


NPN High Voltage transistor A42

■ Features

- Epitaxial planar die construction.
- Ideal for medium power amplification and switching.
- Complementary PNP type available (A92).



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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	300	V
Collector-Emitter Voltage	V_{CE0}	300	V
Emitter-Base Voltage	V_{EB0}	5	V
Collector Current -Continuous	I_C	500	mA
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to 150	$^\circ\text{C}$

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

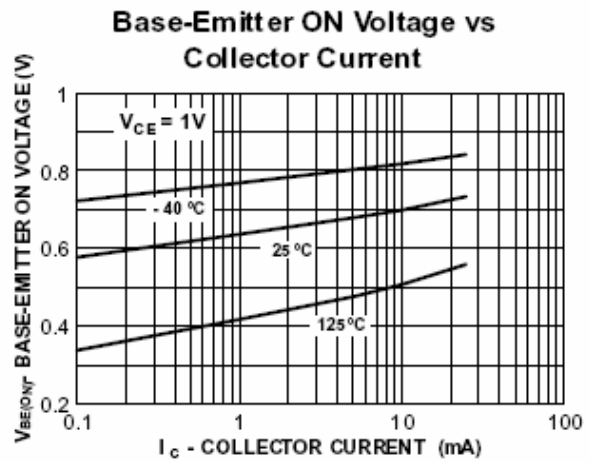
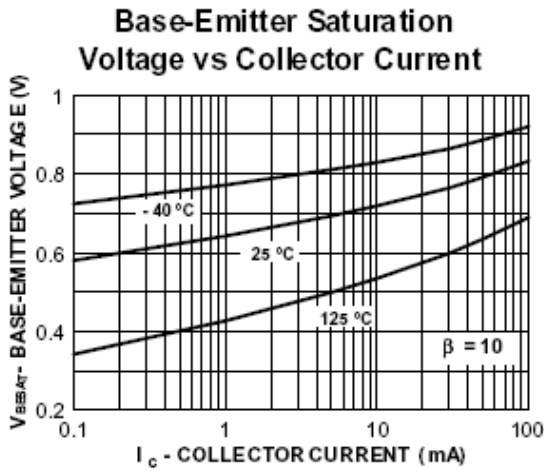
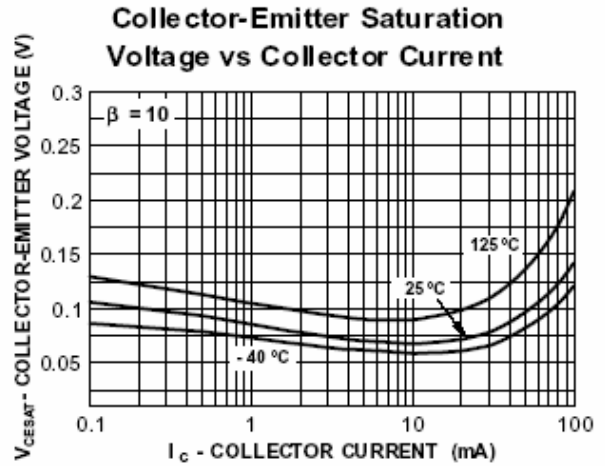
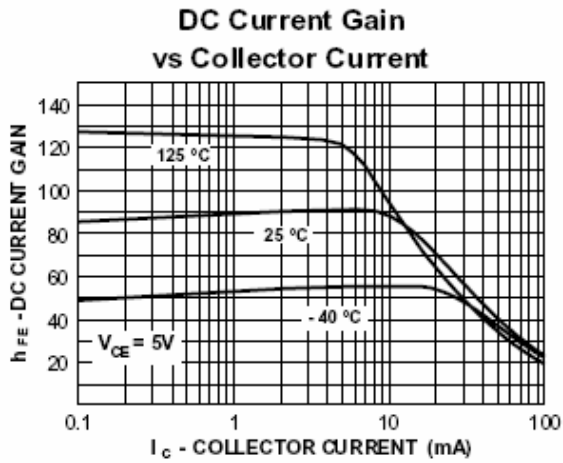
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-to-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100 \mu\text{A}, I_E = 0$	300			V
Collector-to-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1 \text{ mA}, I_B = 0$	300			V
Emitter-to-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100 \mu\text{A}, I_C = 0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB} = 200 \text{ V}, I_E = 0$			0.25	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5 \text{ V}, I_C = 0$			0.1	μA
DC current gain	h_{FE}	$V_{CE} = 10 \text{ V}, I_C = 1 \text{ mA}$	60			
		$V_{CE} = 10 \text{ V}, I_C = 10 \text{ mA}$	80		250	
		$V_{CE} = 10 \text{ V}, I_C = 30 \text{ mA}$	75			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 20 \text{ mA}, I_B = 2 \text{ mA}$			0.2	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 20 \text{ mA}, I_B = 2 \text{ mA}$			0.9	V
Transition frequency	f_T	$V_{CE} = 20 \text{ V}, I_C = 10 \text{ mA}, f = 30 \text{ MHz}$	50			MHz

■ h_{FE} Classification

Rank	A	B1	B2	C
h_{FE}	80 to 100	100 to 150	150 to 200	200 to 250

A42

■ Typical Characteristics



A42

■ Typical Characteristics

