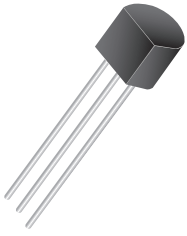
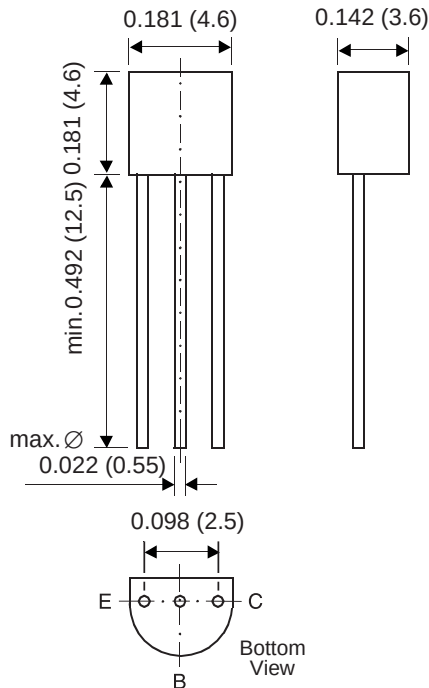




Small Signal Transistors (NPN)



TO-226AA (TO-92)



Dimensions in inches and (millimeters)

Features

- NPN Silicon Epitaxial Planar Transistors for switching and amplifier applications. Especially suitable for AF-driver stages and low power output stages such as portable radios in class-B push-pull operation.
- Complementary to GS9012

Mechanical Data

Case: TO-92 Plastic Package**Weight:** approx. 0.18g**Packaging Codes/Options:**

E6/Bulk- 5K per container, 20K per box

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

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	500	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	-55 to +150	$^\circ\text{C}$

Notes:

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

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Current Gain Group	D E F G H	$V_{CE} = 1\text{V}, I_C = 50\text{mA}$	64 78 96 112 144	— — — — —	91 112 135 166 202	—
DC Current Gain	h_{FE}	$V_{CE} = 1\text{V}, I_C = 500\text{mA}$	40	120	—	
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, I_B = 0$	20	—	—	V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	40	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	5	—	—	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = 25\text{V}, I_E = 0$	—	—	100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 3\text{V}, I_C = 0$	—	—	100	nA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$	—	0.16	0.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$	—	0.91	1.2	V
Base-Emitter ON Voltage	$V_{BE(on)}$	$V_{CE} = 1\text{V}, I_C = 10\text{mA}$	0.6	0.67	0.7	V