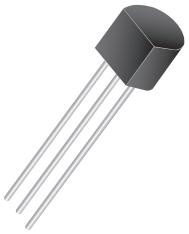
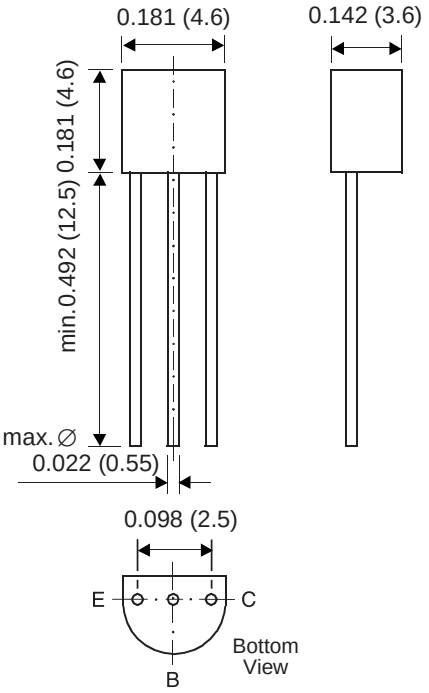
Small Signal Transistors (NPN)



TO-226AA (TO-92)



Dimensions in inches and (millimeters)

Features

- NPN Silicon Epitaxial Planar Transistors for amplifier applications. Especially suitable for low power output stages such as portable radios in class-B push-pull operation.
- Complementary to GS8550xU
- The “x” in the part number can be B, C or D, depending on the current gain.

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}	25	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	800	mA
Power Dissipation at T_{amb} = 25°C	P_{tot}	625(1)	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	200(1)	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	–55 to +150	°C

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

Electrical Characteristics (T_J = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
DC Current Gain	h_{FE}	V_{CE} = 1V, I_C = 5mA	45	135	—	—
Current Gain Group B		V_{CE} = 1V, I_C = 100mA	85	—	160	
C			120	—	200	
D			160	—	300	
		V_{CE} = 1V, I_C = 800mA	—	50	—	
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 2mA, I_B = 0	25	—	—	V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 100µA, I_E = 0	40	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 100µA, I_C = 0	6	—	—	V
Collector Cut-off Current	I_{CBO}	V_{CB} = 35V, I_E = 0	—	—	100	nA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 6V, I_C = 0	—	—	100	nA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 800mA, I_B = 80mA	—	0.51	—	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 800mA, I_B = 80mA	—	1.2	—	V
Base-Emitter ON Voltage	$V_{BE(on)}$	V_{CE} = 1V, I_C = 10mA	—	0.66	1.0	V
Output Capacitance	C_{OB}	V_{CB} = 10V, I_E = 0, f = 1MHz	—	9	—	pF
Gain-Bandwidth Product	f_T	V_{CE} = 10V, I_C = 50mA	—	100	—	MHz