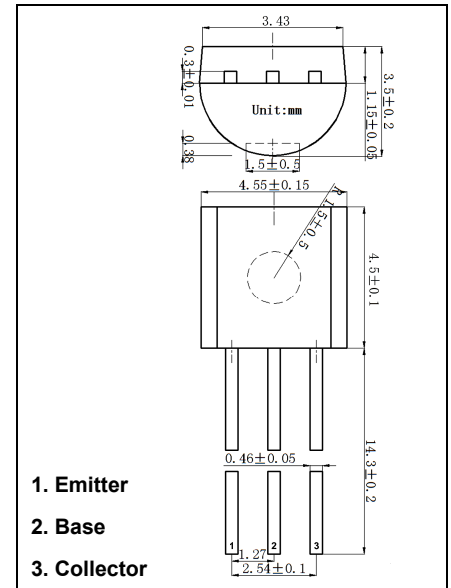


TO-92 Plastic-Encapsulate Transistors

S9014C331 NPN Transistors

Features

- High Total Power Dissipation ($P_C = 0.45W$)
- High h_{FE} and Good Linearity
- Complementary to S9015



Maximum Ratings ($T_a=25^{\circ}C$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector Base Voltage	50	V
V_{CEO}	Collector Emitter Voltage	45	V
V_{EBO}	Emitter Base Voltage	5	V
I_C	Collector Current	100	mA
P_C	Collector Power Dissipation	450	mW
T_j	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature	-55 ~ +150	$^{\circ}C$

Electrical Characteristics ($T_a=25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = 100\mu A, I_E = 0$	50			V
$V_{(BR)CEO}^*$	Collector-emitter breakdown voltage	$I_C = 1mA, I_B = 0$	45			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = 100\mu A, I_C = 0$	5			V
I_{CBO}	Collector cut-off current	$V_{CB} = 50V, I_E = 0$			100	nA
I_{CEO}	Collector cut-off current	$V_{CE} = 35V, I_B = 0$			1	μA
I_{EBO}	Emitter cut-off current	$V_{EB} = 5V, I_C = 0$			100	nA
h_{FE}	DC current gain	$V_{CE} = 5V, I_C = 1mA$	60		1000	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = 100mA, I_B = 5mA$			0.3	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C = 100mA, I_B = 5mA$			1	V
f_T	Transition frequency	$V_{CE}=5V, I_C=10mA, f=30MHz$	150			MHz

Classification Of h_{FE}

Rank	A	B	C	D
Range	60-150	100-300	200-600	400-1000

Typical Characteristics

Static Characteristic

