

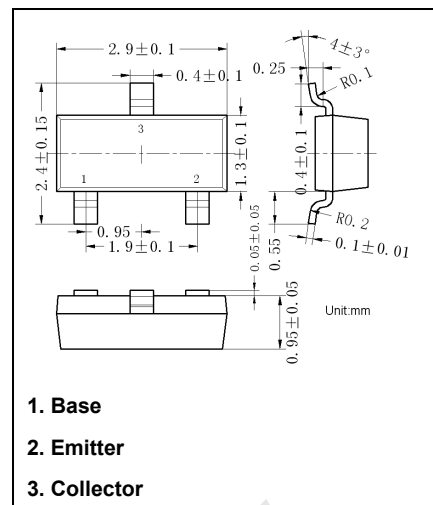
SOT-23 Plastic-Encapsulate Transistors

S9014 NPN Transistors

Features

- Complementary to S9015

Marking: J6



Maximum Ratings ($T_a=25^{\circ}\text{C}$ 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	200	mW
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55 ~ +150	$^{\circ}\text{C}$
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	625	$^{\circ}\text{C/W}$

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

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_c = 100\mu\text{A}, I_E = 0$	50			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_c = 0.1\text{mA}, I_B = 0$	45			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = 100\mu\text{A}, d = 0$	5			V
I_{CBO}	Collector cut-off current	$V_{CB} = 50\text{V}, I_E = 0$			0.1	μA
I_{CEO}	Collector cut-off current	$V_{CE} = 50\text{V}, I_B = 0$			1	μA
I_{EBO}	Emitter cut-off current	$V_{EB} = 3\text{V}, I_C = 0$			0.1	μA
h_{FE}	DC current gain	$V_{CE} = 5\text{V}, I_c = 1\text{mA}$	300		400	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_c = 100\text{mA}, I_B = 5\text{mA}$			0.3	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_c = 100\text{mA}, I_B = 5\text{mA}$			1	V
f_t	Transition frequency	$V_{CE}=5\text{V}, I_c=10\text{mA}, f=30\text{MHz}$	150			MHz

Typical Characteristics

