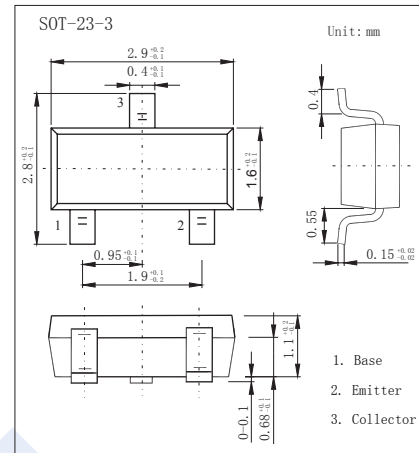


## PNP Transistors

## BSR16 (KSR16)

## ■ Features

- Collector Current Capability  $I_c = -0.8A$
- Collector Emitter Voltage  $V_{CE0} = -60V$

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	-60	V
Collector - Emitter Voltage	$V_{CE0}$	-60	
Emitter - Base Voltage	$V_{EB0}$	-5	
Collector Current - Continuous	$I_c$	-800	mA
Collector Power Dissipation	$P_c$	350	mW
Derate above $25^\circ C$		2.8	mW/ $^\circ C$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	357	$^\circ C/W$
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature range	$T_{stg}$	-55 to 150	

## PNP Transistors

## BSR16 (KSR16)

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V <sub>CB0</sub>	I <sub>c</sub> = -100 μA, I <sub>E</sub> = 0	-60			V
Collector- emitter breakdown voltage	V <sub>CE0</sub>	I <sub>c</sub> = -10 mA, I <sub>B</sub> = 0	-60			
Emitter - base breakdown voltage	V <sub>EB0</sub>	I <sub>E</sub> = -100 μA, I <sub>C</sub> = 0	-5			
Collector-base cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = -50 V, I <sub>E</sub> = 0			-100	nA
		V <sub>CB</sub> = -50 V, I <sub>E</sub> = 0, Ta = 150°C			-10	μA
Collector- emitter cut-off current	I <sub>CEX</sub>	V <sub>CE</sub> = -30 V, V <sub>EB</sub> = 0.5V			-50	nA
Reverse Base Current	I <sub>BEX</sub>	V <sub>CE</sub> = -30 V, V <sub>EB</sub> = 3V			-50	
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -5V, I <sub>C</sub> = 0			-100	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -150 mA, I <sub>B</sub> = -15mA			-0.4	V
		I <sub>C</sub> = -500 mA, I <sub>B</sub> = -50mA			-1.6	
Base - emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = -150 mA, I <sub>B</sub> = -15mA			-1.3	
		I <sub>C</sub> = -500 mA, I <sub>B</sub> = -50mA			-2.6	
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = -10V, I <sub>C</sub> = -0.1mA	75			
		V <sub>CE</sub> = -10V, I <sub>C</sub> = -1mA	100			
		V <sub>CE</sub> = -10V, I <sub>C</sub> = -10mA	100			
		V <sub>CE</sub> = -10V, I <sub>C</sub> = -150mA	100		300	
		V <sub>CE</sub> = -10V, I <sub>C</sub> = -500mA	50			
Turn-On Time	t <sub>on</sub>	V <sub>CC</sub> = -30V, I <sub>C</sub> = -150mA, I <sub>B1</sub> = -15mA			45	ns
Delay Time	t <sub>d</sub>				10	
Rise Time	t <sub>r</sub>				40	
Turn-Off Time	t <sub>off</sub>	V <sub>CC</sub> = -30V, I <sub>C</sub> = -150mA, I <sub>B1</sub> = I <sub>B2</sub> = -15mA			100	
Storage Time	t <sub>s</sub>				80	
Fall Time	t <sub>f</sub>				30	
Collector output capacitance	C <sub>ob</sub>		V <sub>CB</sub> = -10V, I <sub>E</sub> = 0, f = 1MHz			
Emitter-Base output capacitance	C <sub>eb</sub>	V <sub>EB</sub> = -2V, I <sub>C</sub> = 0, f = 1MHz			30	
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = -20V, I <sub>C</sub> = -50mA, f = 100MHz	200			MHz

## ■ Marking

Marking	T8
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