

NPN Switching Transistors

BSR14

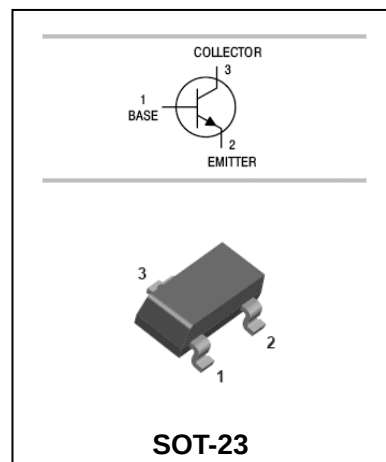
FEATURES

- High current.
- Low voltage.



APPLICATIONS

- Switching and linear applications.



ORDERING INFORMATION

Type No.	Marking	Package Code
BSR14	U8	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	75	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	800	mA
I_{CM}	Peak Collector Current	800	mA
I_{BM}	Peak Base Current	200	mA
P_C	Collector Dissipation	250	mW
T_j, T_{stg}	Junction and Storage Temperature	-65 to +125	°C



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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	75		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\mu A, I_B=0$	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6		V
Collector cut-off current	I_{CBO}	$V_{CB}=60V, I_E=0$ $V_{CB}=60V, I_E=0, T_j=150^\circ C$		10 10	nA μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$		10	nA
DC current gain	h_{FE}	$V_{CE}=10V, I_C=0.1mA$ $V_{CE}=10V, I_C=1mA$ $V_{CE}=10V, I_C=10mA$ $V_{CE}=10V, I_C=150mA$ $V_{CE}=10V, I_C=500mA$ $V_{CE}=1V, I_C=150mA$	35 50 75 100 40 50	300	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=150mA, I_B=15mA$ $I_C=500mA, I_B=50mA$		0.4 1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=150mA, I_B=15mA$ $I_C=500mA, I_B=50mA$	0.6	1.2 2	V
Transition frequency	f_T	$V_{CE}=20V, I_C=20mA$ $f=100MHz$	300		MHz
Collector capacitance	C_C	$V_{CB}=10V, I_E=0, f=1MHz$		8	pF
Turn-on time	t_{on}	$I_{Con}150mA, I_{Bon}=15mA,$ $I_{Boff}=-15mA$		35	ns
Delay time	t_d			15	ns
Rise time	t_r			20	ns
Turn-off time	t_{off}			250	ns
Storage time	t_s			200	ns
Fall time	t_f			60	ns

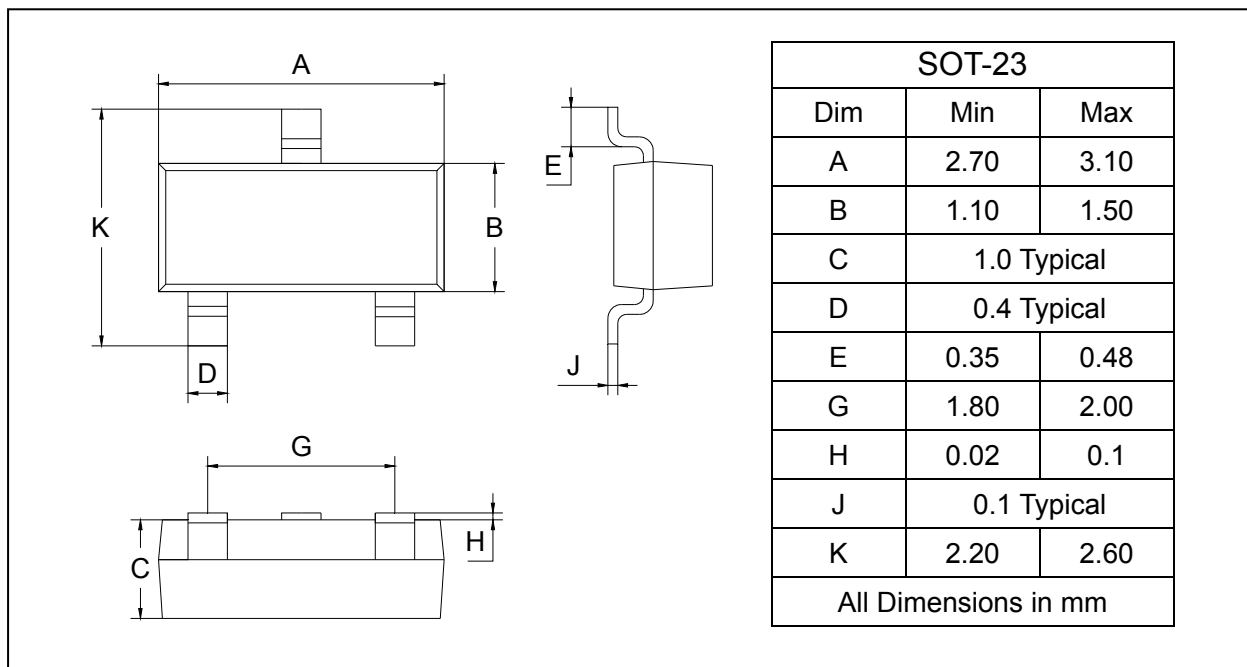
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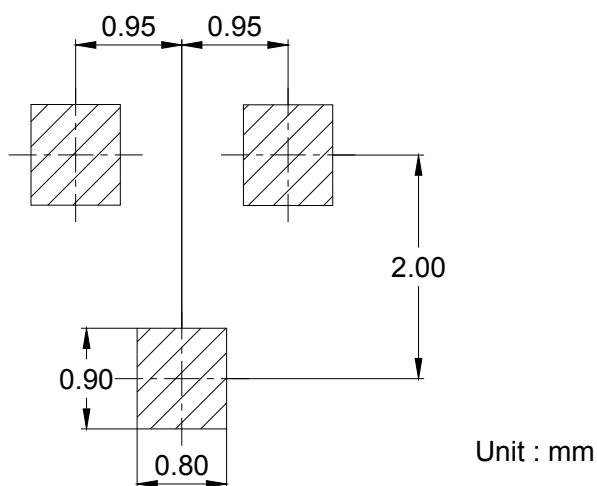
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
BSR14	SOT-23	3000/Tape&Reel