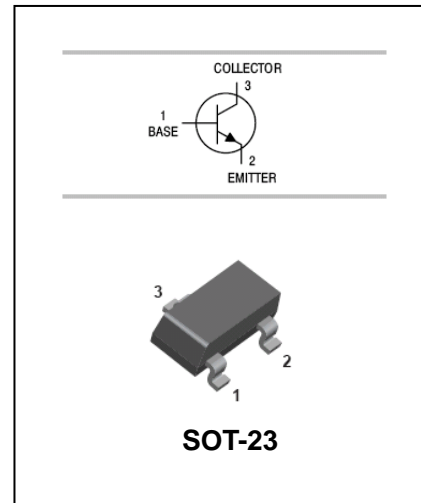


Silicon Epitaxial Planar Transistor

2SD2114

FEATURES

- High DC current gain
- High emitter-base voltage.
- High total power dissipation.($P_C=200\text{mW}$)



APPLICATIONS

- General purpose amplifiers.

ORDERING INFORMATION

Type No.	Marking	Package Code
2SD2114	BBV/BBW	SOT-23

MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	25	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	12	V
I_C	Collector Current -Continuous	500	mA
P_C	Collector Dissipation	200	mW
T_j, T_{stg}	Junction and Storage Temperature	-55~150	$^\circ\text{C}$

Silicon Epitaxial Planar Transistor

2SD2114

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	25			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	12			V
Collector cut-off current	I_{CBO}	$V_{CB}=25V, I_E=0$			0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=10V, I_C=0$			0.5	μA
DC current gain	h_{FE}	$V_{CE}=3V, I_C=100mA$	820		2700	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=20mA$		0.18	0.4	V
Base-emitter on voltage	$V_{BE(on)}$	$I_C=500mA, V_{CE}=1V$			1.2	V
Output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$		8		pF
Transition frequency	f_T	$V_{CE}=10V, I_E=-50mA$ $f=100MHz$	350			MHz

CLASSIFICATION OF $h_{FE(1)}$

Rank	V	W
Range	820-1800	1200-2700
Marking	BBV	BBW

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

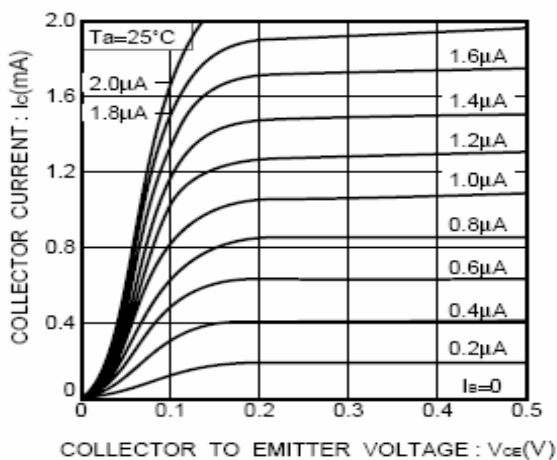


Fig.1 Grounded emitter output characteristics

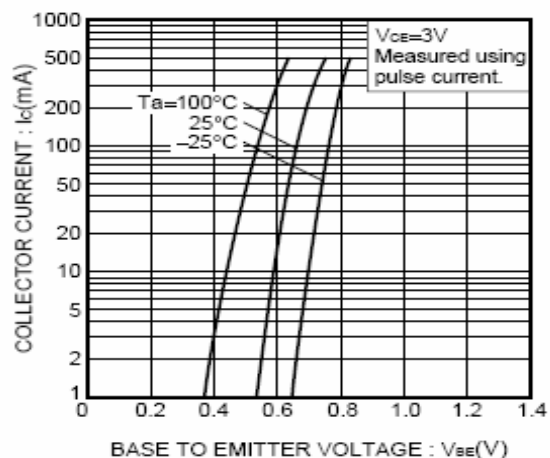


Fig.2 Grounded emitter propagation characteristics

Silicon Epitaxial Planar Transistor

2SD2114

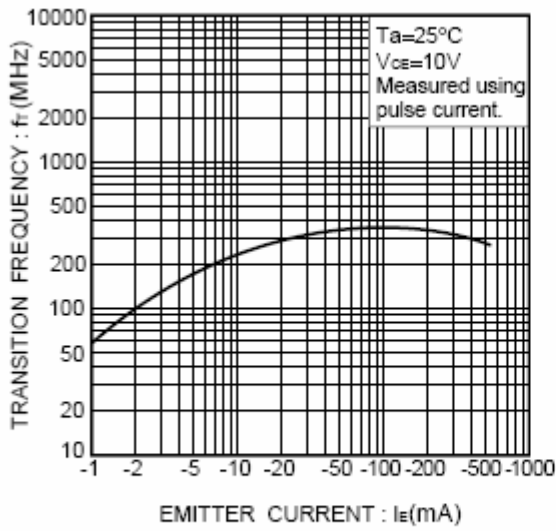


Fig.3 Gain bandwidth product vs. emitter current

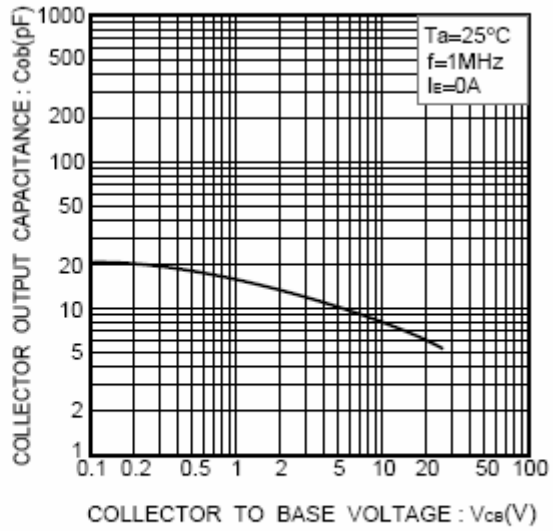


Fig.4 Collector output capacitance vs. collector-base voltage

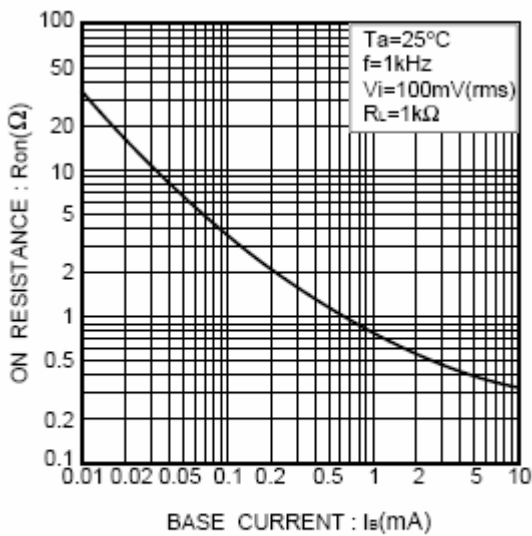


Fig.5 Output-on resistance vs. base current

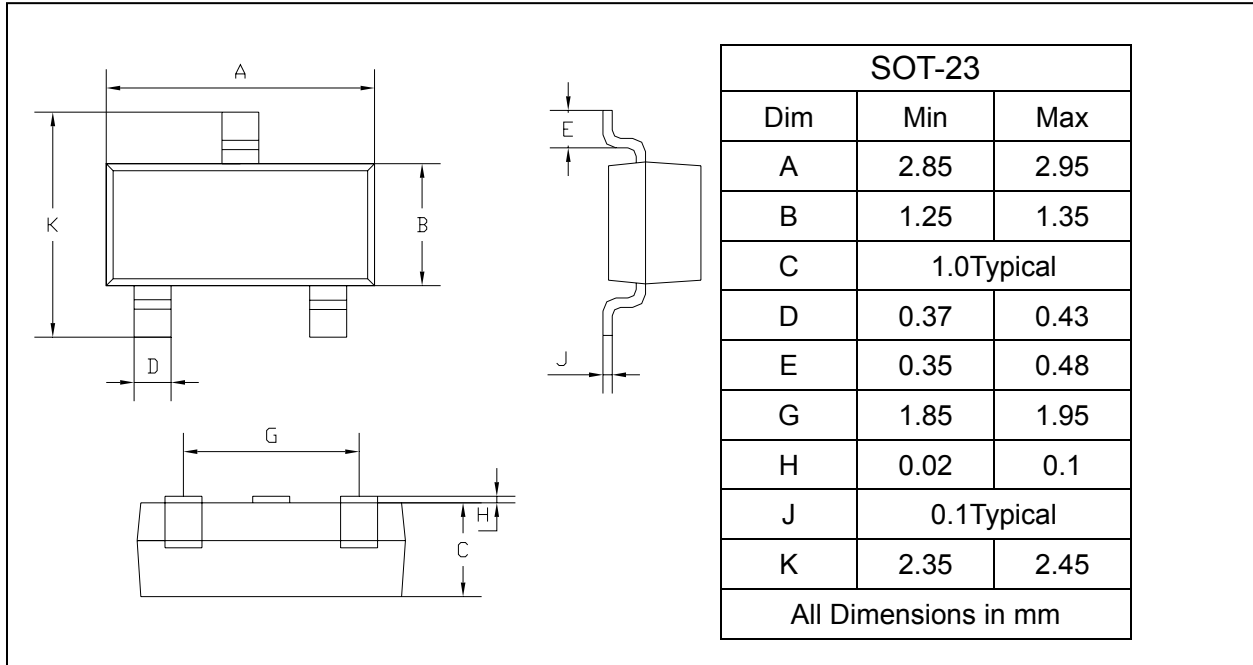
Silicon Epitaxial Planar Transistor

2SD2114

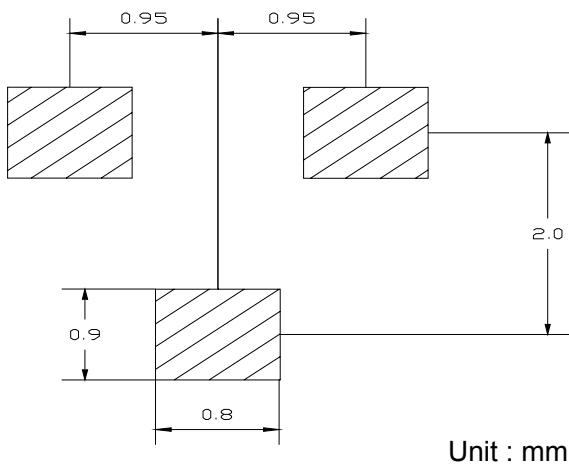
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
2SD2114	SOT-23	3000/Tape&Reel