

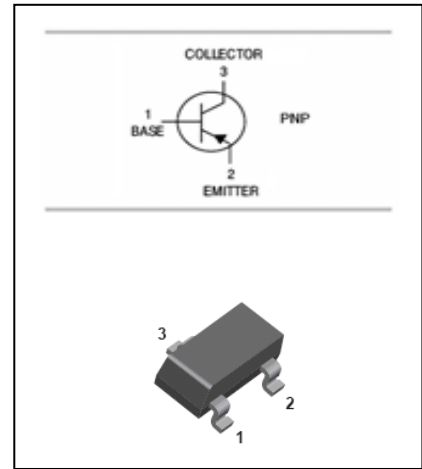
PNP Silicon Epitaxial Planar Transistor

2SB1116A

FEATURES

- Low $V_{CE(sat)}$
- High P_T in small dimension with general-purpose
- Complementary transistor with MMBT1616A
- RoHS compliant with Halogen-free

HF



ORDERING INFORMATION

SOT-23

Type No.	Marking	Package Code
2SB1116A-L	1116A	SOT-23
2SB1116A-K	1116A	SOT-23
2SB1116A-U	1116A	SOT-23

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-80	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current –Continuous DC Pulse width $\leq 10\text{ms}$	-1 -2	A
P_C	Collector Power Dissipation	350	mW
T_J, T_{STG}	Junction and Storage Temperature	-55 to +150	$^{\circ}\text{C}$

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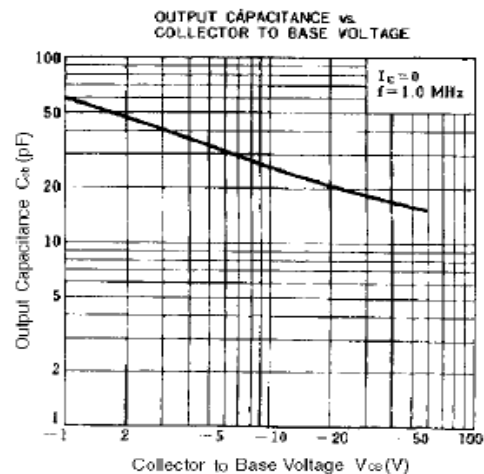
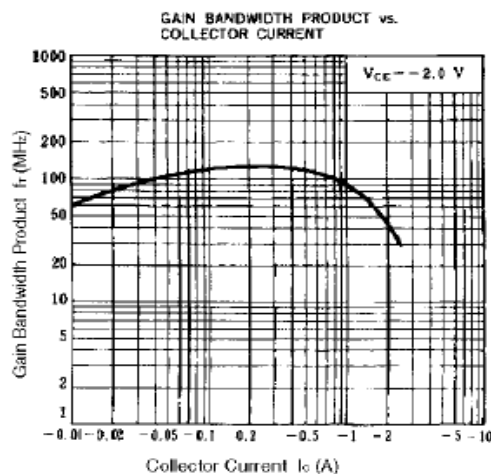
ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu A, I_E=0$	-80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1mA, I_B=0$	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu A, I_C=0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CB}=-60V, I_E=0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-6V, I_C=0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE}=-2V, I_C=-100mA$ $V_{CE}=-2V, I_C=-1A$	135 81		600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-1A, I_B=-50mA$		-0.2	-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-1A, I_B=-50mA$		-0.9	-1.2	V
Base-emitter on voltage	$V_{BE(on)}$	$V_{CE}=-2V, I_C=-50mA$	-0.6	-0.65	-0.75	V
Transition frequency	f_T	$V_{CE}=-2V, I_C=-100mA$	70	120		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10V, I_E=0, f=1MHz$		25		pF
Turn-on time	t_{on}	$V_{CE}=-10V, I_C=-100mA$ $V_{BE(off)}=2-3V$ $I_{B1}=-I_{B2}=-10mA$		0.07		μS
Fall time	t_f			0.07		μS
Storage temperature	t_s			0.70		μS

CLASSIFICATION OF h_{FE1}

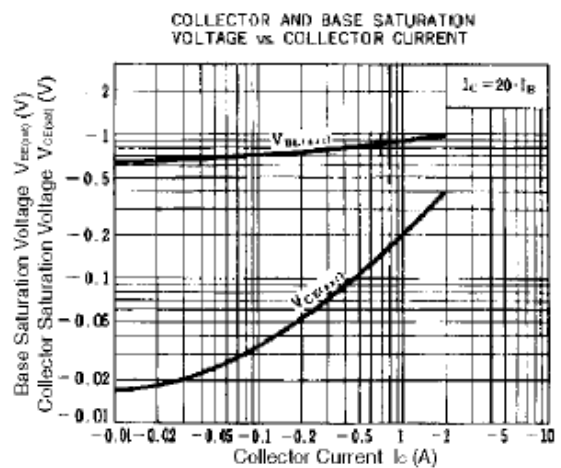
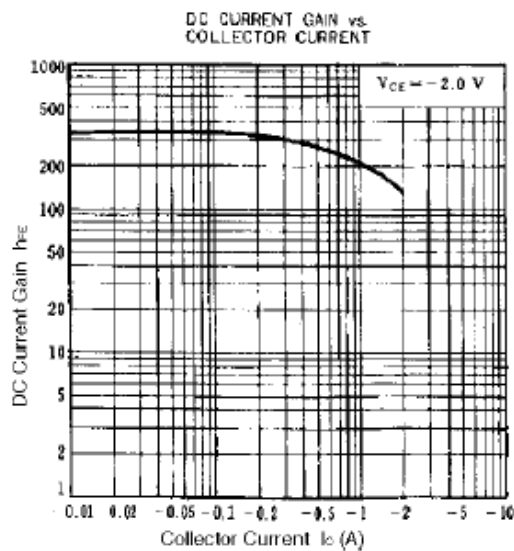
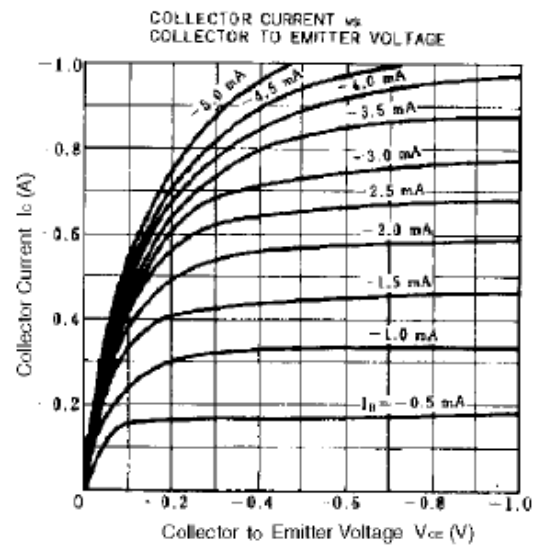
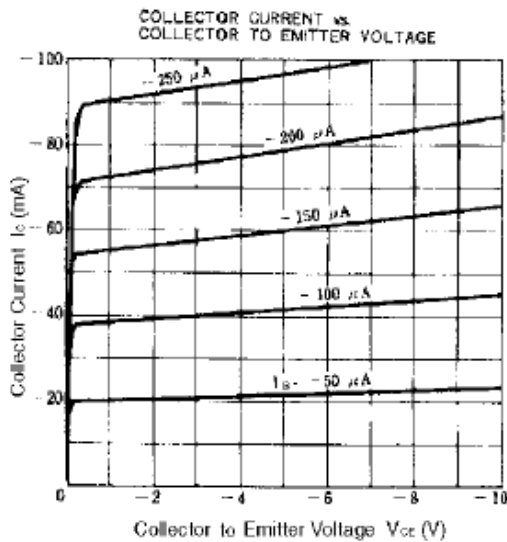
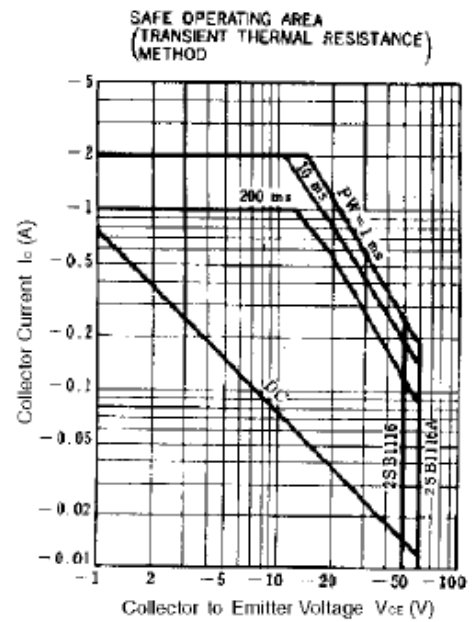
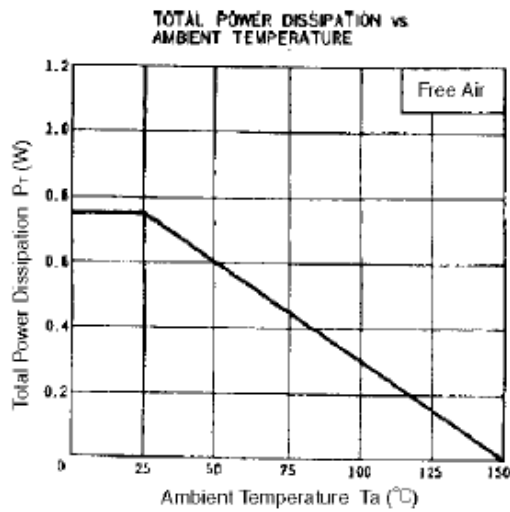
RANK	L	K	U
h_{FE1}	135-270	200-400	300-600

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



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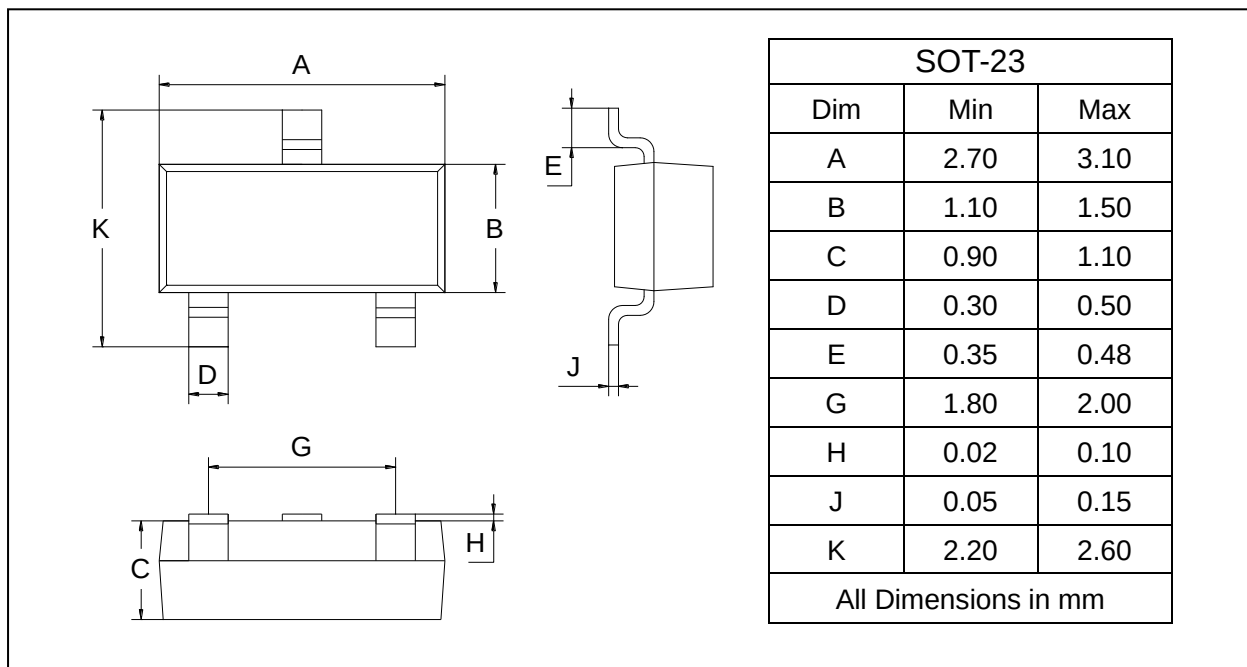
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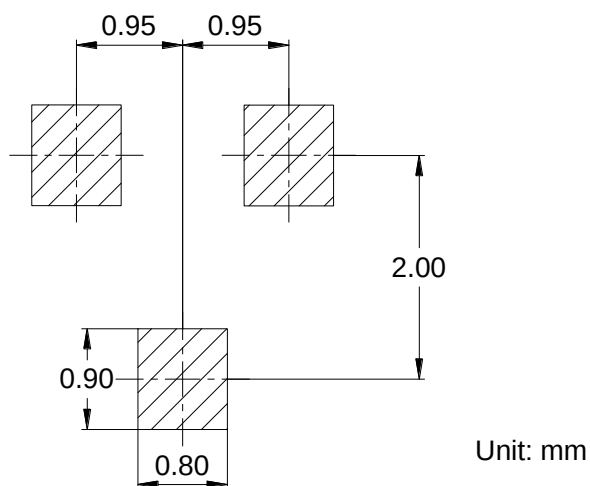
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
2SB1116A	SOT-23	3000 pcs / Tape & Reel