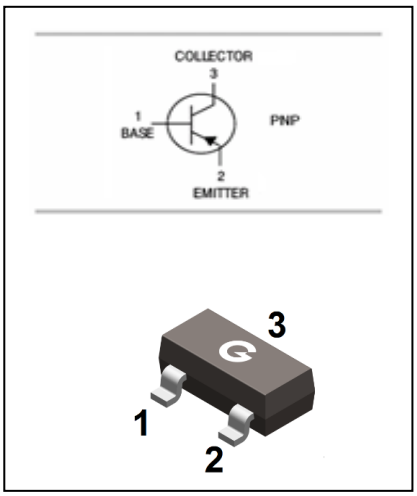
PNP Silicon Epitaxial Planar Transistor **2SB1116**

FEATURES

HF

- Low $V_{CE(sat)}$
- High P_D in small dimension with general-purpose
- Complementary transistor with 2SD1616
- RoHS compliant with Halogen-free



ORDERING INFORMATION

Type No.	Marking	Package Code
2SB1116-L	1116	SOT-23
2SB1116-K	1116	SOT-23
2SB1116-U	1116	SOT-23

MAXIMUM RATING @ T_A = 25°C unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Continuous Collector Current	-1	A
I_{CM}	Peak Collector Current	-2	A
P_C	Collector Power Dissipation	350	mW
$R_{\theta JA}$	Thermal Resistance Junction-to-Air *1	200	°C/W
$R_{\theta JC}$	Thermal Resistance Junction-to-Case *1	100	°C/W
$R_{\theta JL}$	Thermal Resistance Junction-to-Lead *1	125	°C/W
T_J	Junction Temperature Range	-55 ~ +150	°C
T_{STG}	Storage Temperature Range	-55 ~ +150	°C

Note 1: The data tested by surface mounted on a 1 inch^2 FR-4 board with 2OZ copper

PNP Silicon Epitaxial Planar Transistor **2SB1116**

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

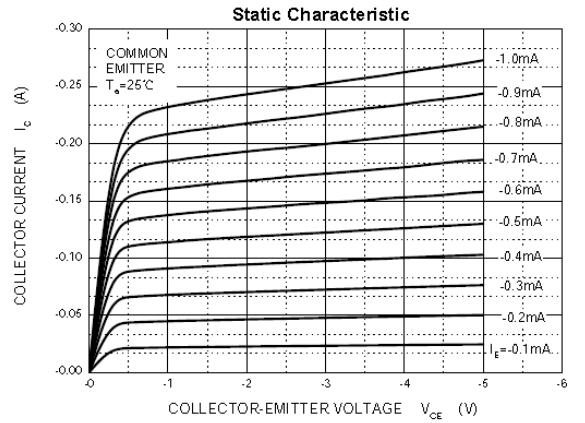
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base Breakdown Voltage	$V_{(BR)CBO}$	I_C = -100μA, I_E = 0	-60			V
Collector-emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = -1mA , I_B = 0	-50			V
Emitter-base Breakdown Voltage	$V_{(BR)EBO}$	I_E = -100μA, I_C = 0	-6			V
Collector Cut-off Current	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

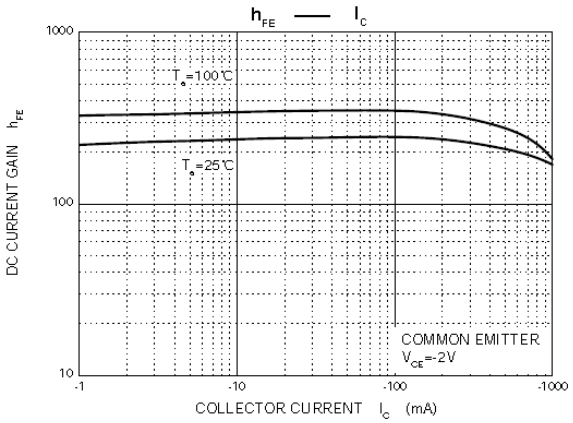
CLASSIFICATION OF h_{FE1}

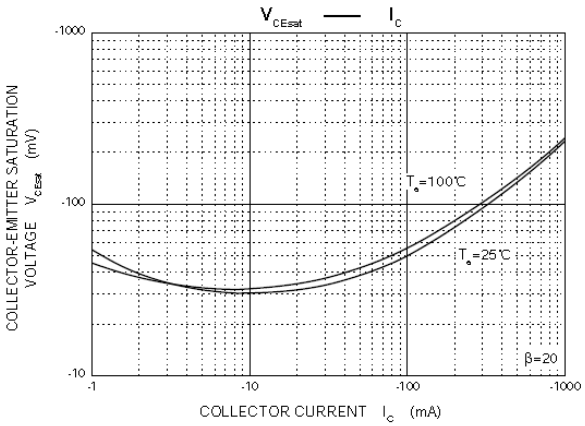
RANK	L	K	U
h_{FE1}	135-270	200-400	300-600

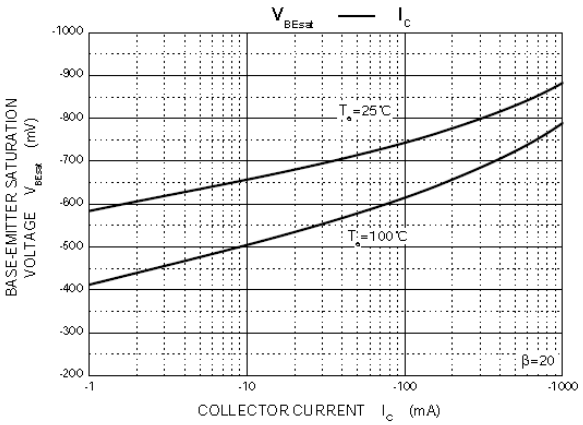
PNP Silicon Epitaxial Planar Transistor **2SB1116**

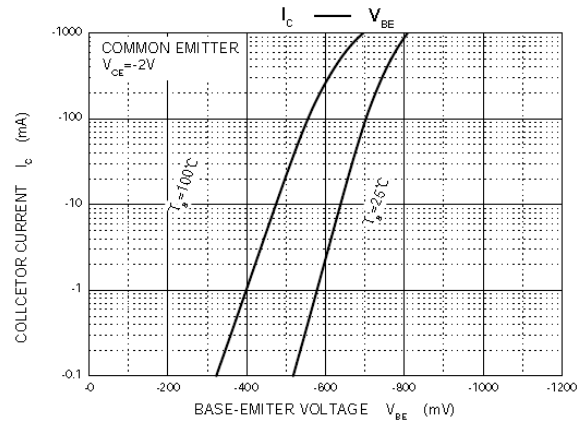
TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

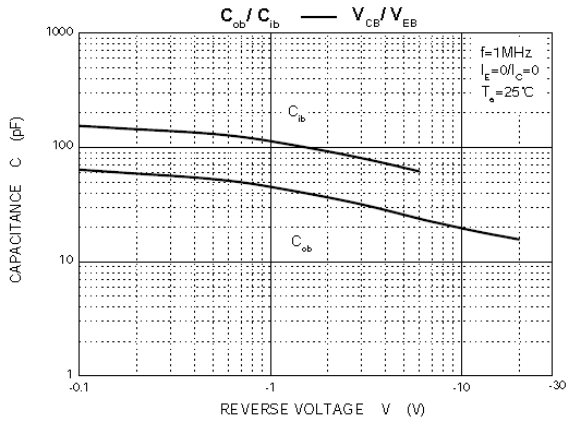








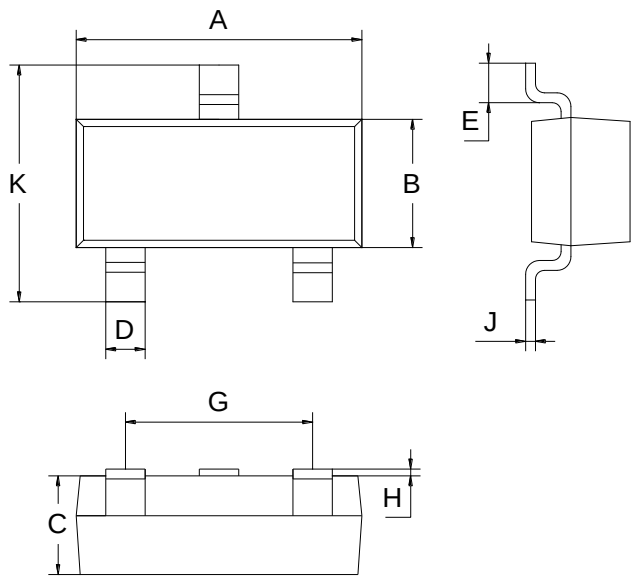




PNP Silicon Epitaxial Planar Transistor **2SB1116**

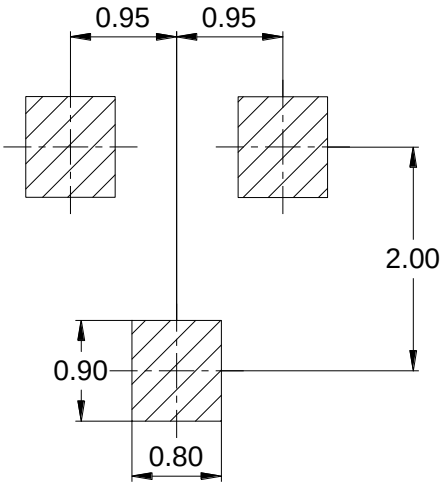
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit: mm

PACKAGE INFORMATION

Device	Package	Shipping
2SB1116	SOT-23	3000 pcs / Tape & Reel