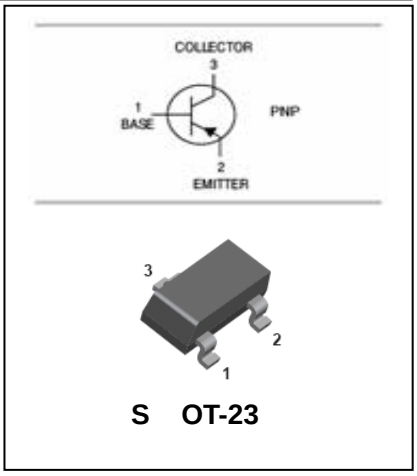
Silicon Epitaxial Planar Transistor **2SA1036**

FEATURES

- Large $I_{C.ICMAX.}$ =-500mA.
- Low $V_{CE(sat).}$ Ideal for low-voltage operation.

Lead-free



S OT-23

APPLICATIONS

- Ideal for low-voltage operation.

ORDERING INFORMATION

Type No.	Marking	Package Code
2SA1 036	HP ,HQ,HR	SOT -23

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol Parameter		**Value**	**Units**
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-32	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-500	mA
P_C	Collector Dissipation	200	mW
T_j, T_{stg}	Junction and Storage Temperature	-55~150	℃

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

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Parameter S	**ymbol**	**Test conditions**	**MIN**	**TYP**	**MAX**	**UNIT**
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-100μA,I_E=0	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-1mA,I_B=0	-32			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-100μA,I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-20V,I_E=0			-1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=-4V,I_C=0			-1	μA
DC current gain	h_{FE}	V_{CE}=-3V,I_C=-10mA	82		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-100mA, I_B=-10mA			-0.4	V
Transition frequency	f_T	V_{CE}=-5V, I_C=-20mA f=100MHz	200			MHz
Collector output capacitance	C_{ob}	V_{CB}=-10V,I_E=0,f=1MHz	7			pF

CLASSIFICATION OF $h_{FE(1)}$

Rank P		Q	R
Range 82-1	80	120-270	180-390

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TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

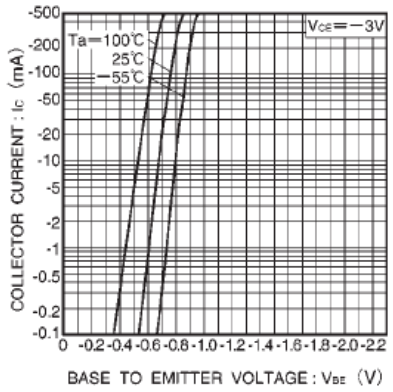

Fig.1 Grounded emitter propagation

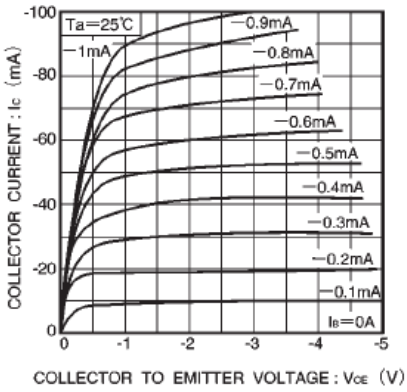

Fig.2 Grounded emitter output characteristics (Ⅰ)

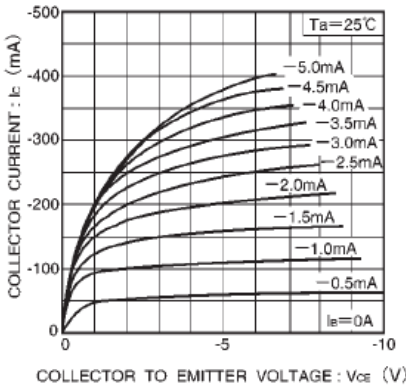

Fig.3 Grounded emitter output characteristics (Ⅱ)

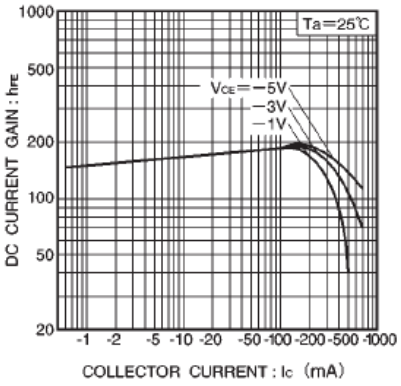

Fig.4 DC current gain vs. collector current (Ⅰ)

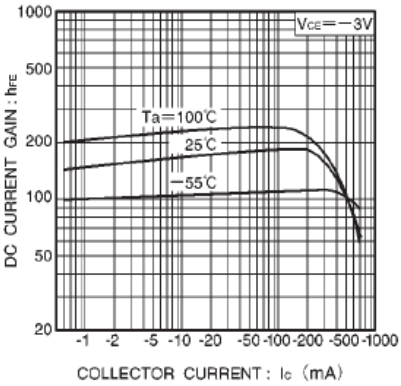

Fig.5 DC current gain vs. collector current (Ⅱ)

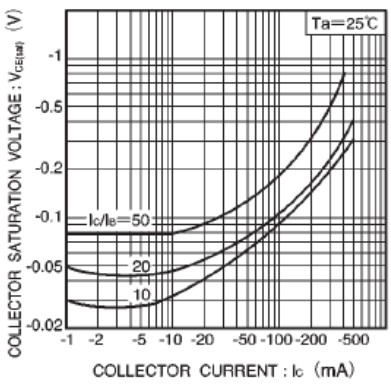

Fig.6 Collector-emitter saturation voltage vs. collector current (Ⅰ)

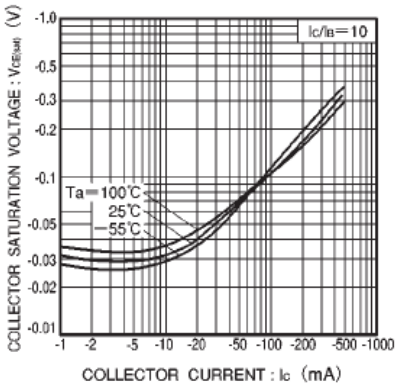

Fig.7 Collector-emitter saturation voltage vs. collector current (Ⅱ)

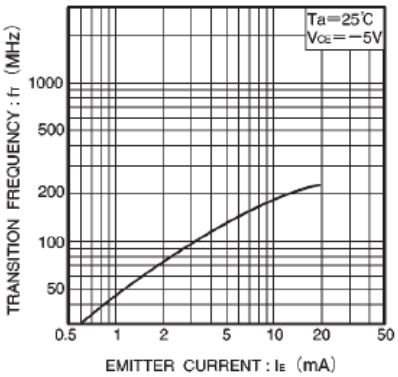

Fig.8 Gain bandwidth product vs. emitter current

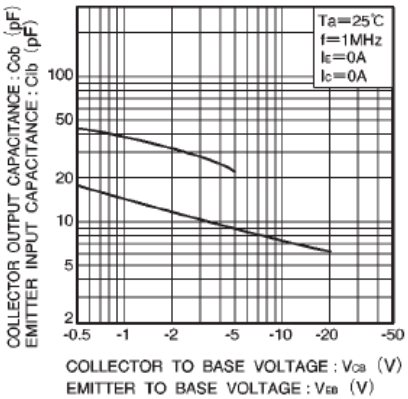

Fig.9 Collector output capacitance vs. collector-base voltage. Emitter input capacitance vs. emitter-base voltage

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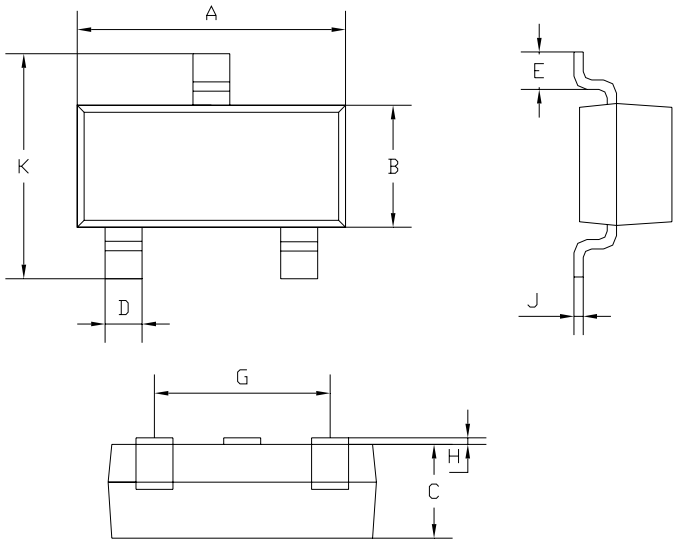
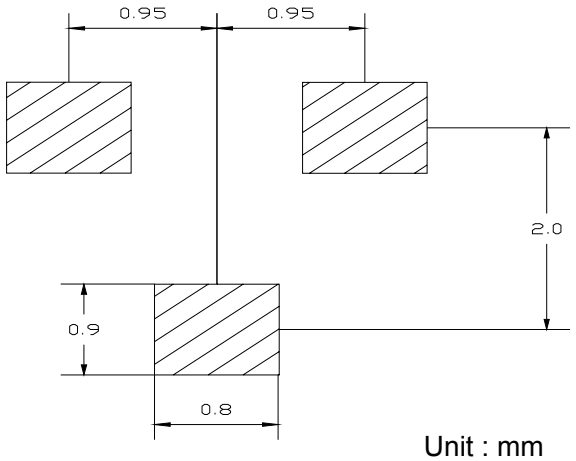
PACKAGE OUTLINE

Plastic surface mounted package SOT -23



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1Typical	
K	2.35	2.45
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFO RMATION

Device	Package	Shipping
2SA1036	SOT-23	3000/Tape&Reel