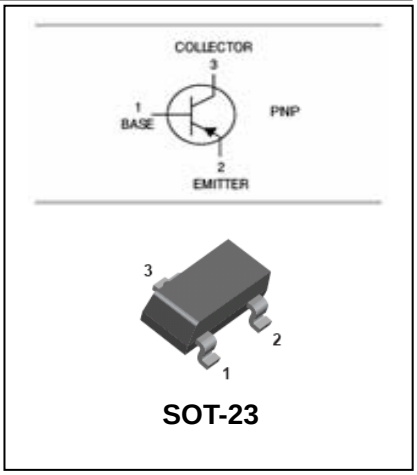
Silicon Epitaxial Planar Transistor **2SA1037**

FEATURES

- Low $I_{C.ICMAX.}$ =-150mA.
- Low $V_{CE(sat).}$ Ideal for low-voltage operation.

Lead-free



SOT-23

APPLICATIONS

- Ideal for low-voltage operation.

ORDERING INFORMATION

Type No.	Marking	Package Code
2SA1037	FQ,FR,FS	SOT-23

MAXIMUM RATING @ Ta=25℃ 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	Collector Current -Continuous	-150	mA
P_C	Collector Dissipation	200	mW
T_j, T_{stg}	Junction and Storage Temperature	-55~150	℃

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Silicon Epitaxial Planar Transistor **2SA1037**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-50μA,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=-50μA,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}=-6V,I_C=-1mA	120		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-50mA, I_B=-5mA			-0.5	V
Transition frequency	f_T	V_{CE}=-12V, I_C=-2mA f=30MHz		140		MHz
Collector output capacitance	C_{ob}	V_{CB}=-12V,I_E=0,f=1MHz		4.0	5.0	pF

CLASSIFICATION OF $h_{FE(1)}$

Rank	Q	R	S
Range	120-270	180-390	270-560
Marking	FQ	FR	FS

Silicon Epitaxial Planar Transistor **2SA1037**

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

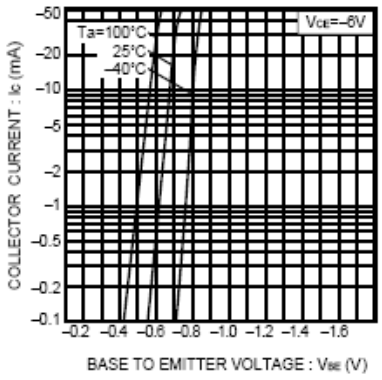


Fig.1 Grounded emitter propagation characteristics

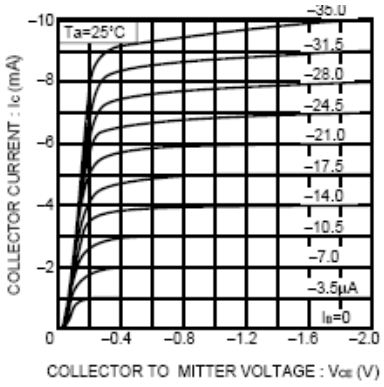


Fig.2 Grounded emitter output characteristics (I)

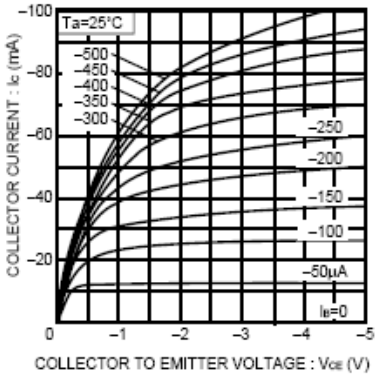


Fig.3 Grounded emitter output characteristics (II)

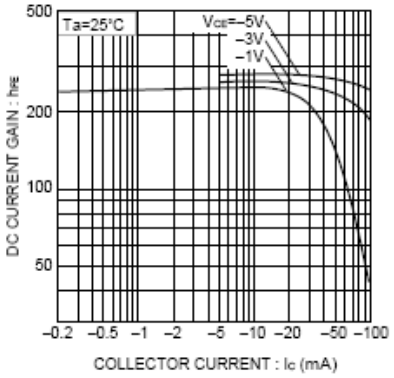


Fig.4 DC current gain vs. collector current (I)

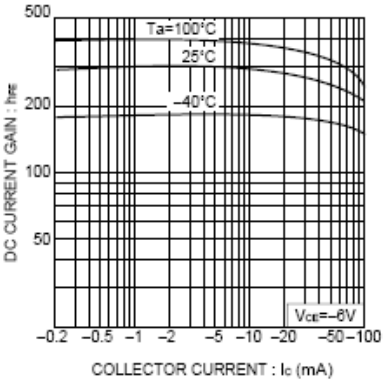


Fig.5 DC current gain vs. collector current (II)

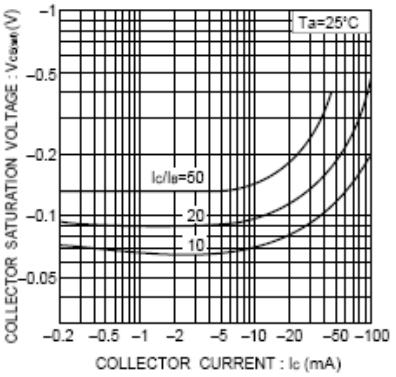


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

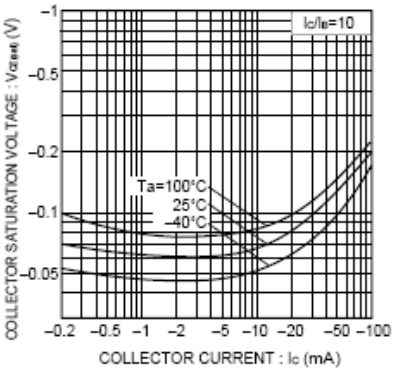


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

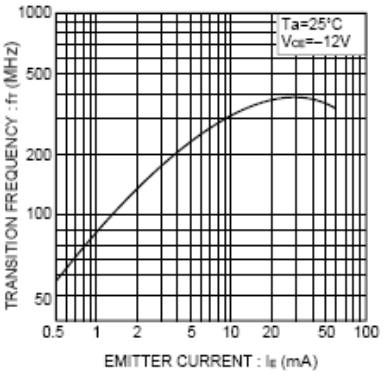


Fig.8 Gain bandwidth product vs. emitter current

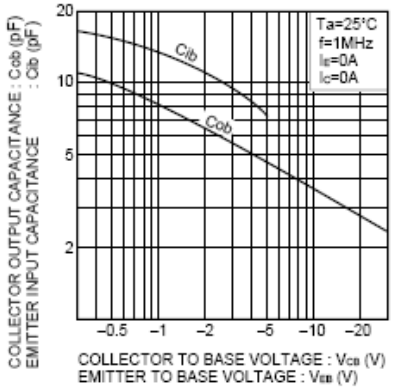
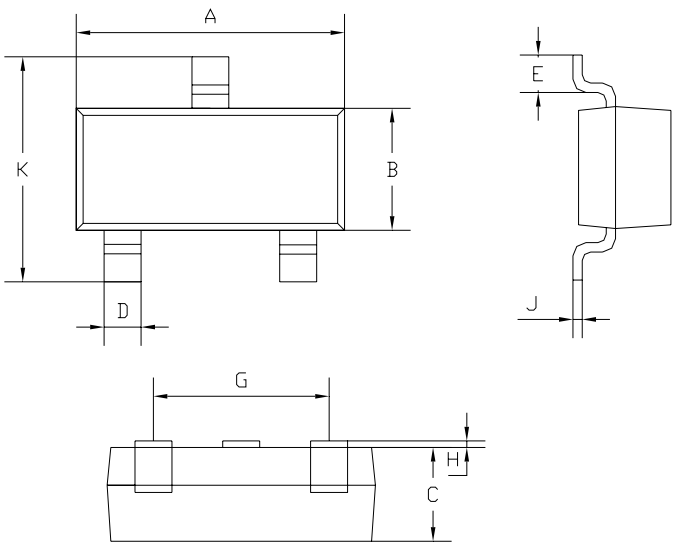


Fig.9 Collector output capacitance vs. collector-base voltage
Emitter inputcapacitance vs. emitter-base voltage

Silicon Epitaxial Planar Transistor **2SA1037**

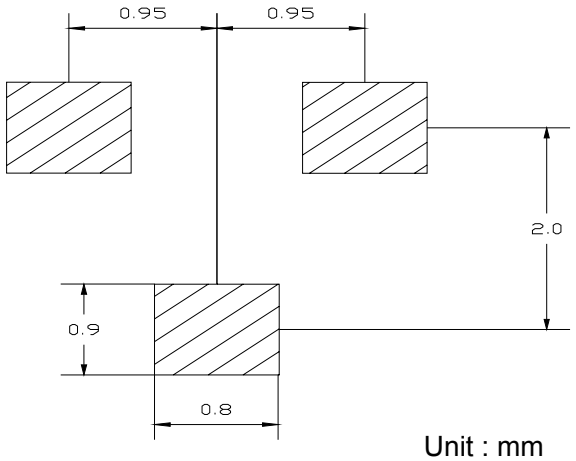
PACKAGE OUTLINE

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 INFORMATION

Device	Package	Shipping
2SA1037	SOT-23	3000/Tape&Reel