Elektronische Bauelemente

2SA1037

-0.15A, -60V

PNP Silicon General Purpose Transistor

RoHS Compliant Product
A suffix of "-C" specifies halogen and lead free

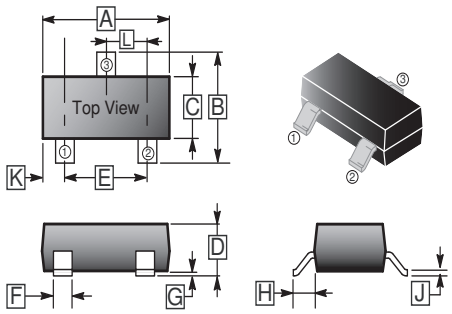
FEATURES

- Excellent h_{FE} linearity.
- Complements of the 2SC2412

MECHANICAL DATA

- Case: SOT-23, Molded Plastic
- Weight: 0.008 grams(approx.)

SOT-23



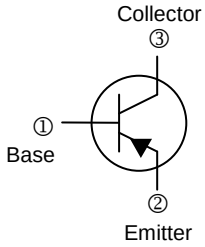
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.80	3.04	G	0.09	0.18
B	2.10	2.55	H	0.45	0.60
C	1.20	1.40	J	0.08	0.177
D	0.89	1.15	K	0.6 REF.	
E	1.78	2.04	L	0.89	1.02
F	0.30	0.50			

CLASSIFICATION OF h_{FE}

Product-Rank	2SA1037-Q	2SA1037-R	2SA1037-S
Range	120~270	180~390	270~560
Marking	FQ	FR	FS

PACKAGE INFORMATION

Package	MPQ	LeaderSize
SOT-23	3K	7' inch



ABSOLUTE MAXIMUM RATINGS (T_A = 25℃ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	-60	V
Collector to Emitter Voltage	V_{CEO}	-50	V
Emitter to Base Voltage	V_{EBO}	-6	V
Collector Currrent	I_C	-150	mA
Collector Power Dissipation	P_C	200	mW
Junction & Storage Temperature	T_J, T_{STG}	+150, -55 ~ +150	℃

ELECTRICAL CHARACTERISTICS (T_A = 25℃ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	-60	-	-	V	I_C=-50μA, I_E=0
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	-50	-	-	V	I_C=-1μA, I_B=0
Emitter-base breakdown voltage	$V_{(BR)EBO}$	-6	-	-	V	I_E=-50μA, I_C=0
Collector cut-off current	I_{CBO}	-	-	-0.1	μA	V_{CB}=-60V, I_E=0
Emitter cut-off current	I_{EBO}	-	-	-0.1	μA	V_{EB}= -6V, I_C=0
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	-0.5	V	I_C=-50mA, I_B=-5mA
DC current gain	h_{FE}	120	-	560		V_{CE}=-6V,I_C=-1mA
Transition frequency	f_T	-	140	-	MHz	V_{CE}=-12V, I_E=-2mA, f=30MHz
Collector output capacitance	C_{ob}	-	4.0	5.0	pF	V_{CB}=-12V, I_E=0, f=1MHz

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CHARACTERISTIC CURVES

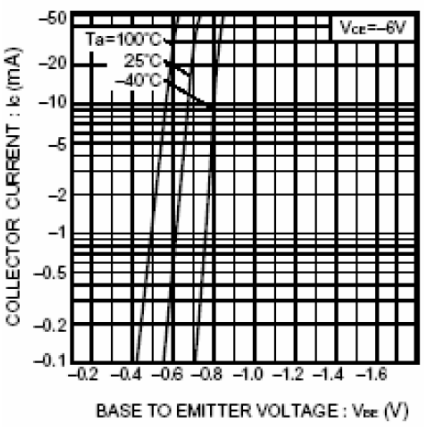

Fig.1 Grounded emitter propagation characteristics

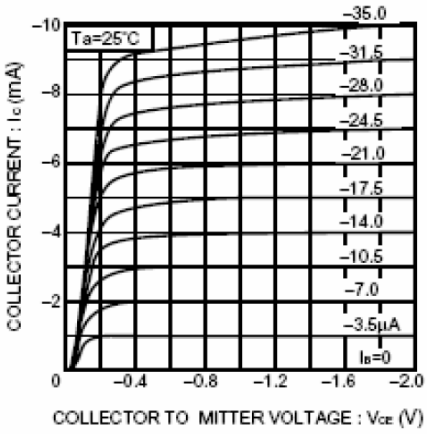

Fig.2 Grounded emitter output characteristics (I)

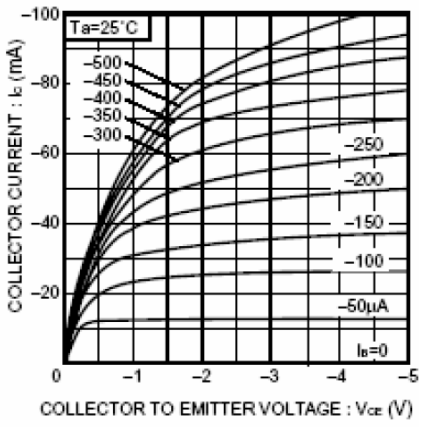

Fig.3 Grounded emitter output characteristics (II)

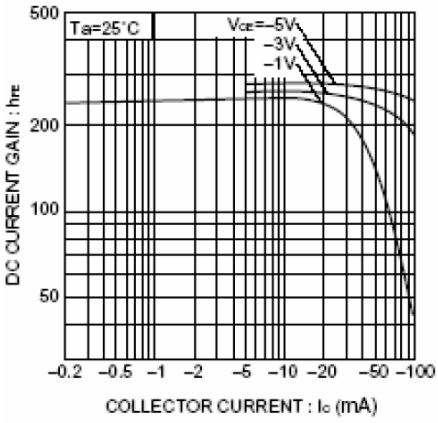

Fig.4 DC current gain vs. collector current (I)

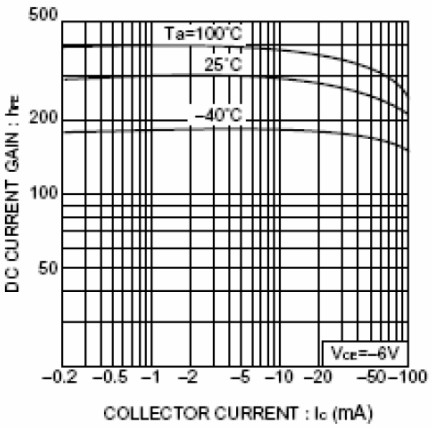

Fig.5 DC current gain vs. collector current (II)

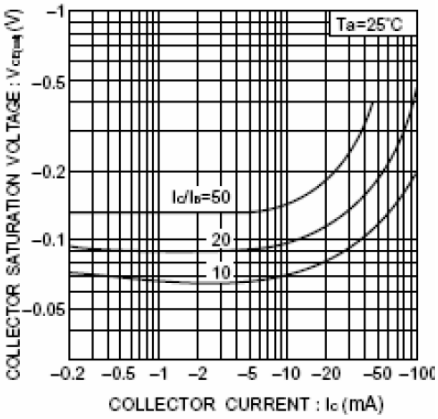

Fig.6 Collector-emitter saturation voltage vs. collector current (I)

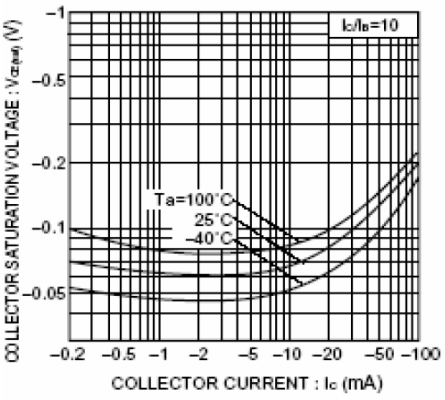

Fig.7 Collector-emitter saturation voltage vs. collector current (II)

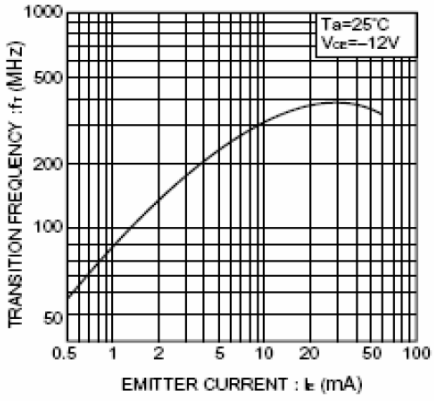

Fig.8 Gain bandwidth product vs. emitter current

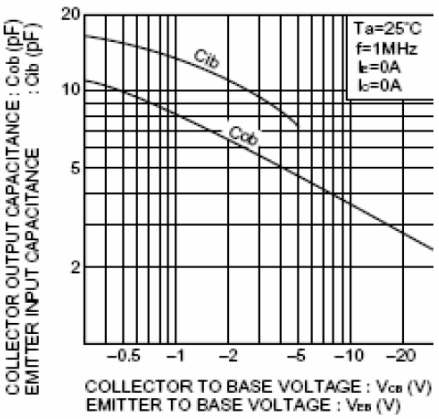

Fig.9 Collector output capacitance vs. collector-base voltage
Emitter inputcapacitance vs. emitter-base voltage