Elektronische Bauelemente

2SC2412

NPN Silicon
General Purpose Transistor

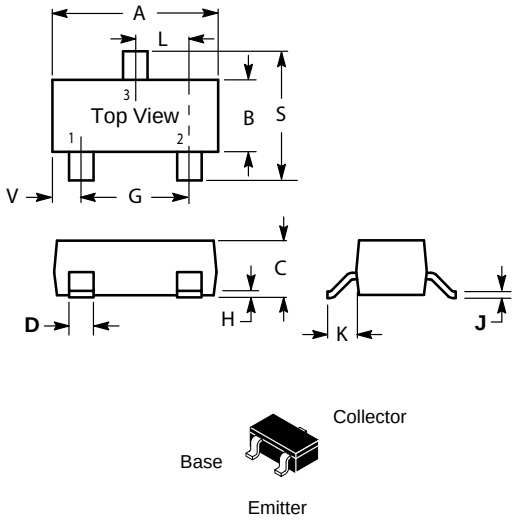
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Low Cob.
- Cob=2.0pF
- Compements the 2SA1037K
- RoHS Compliant Product

STRUCTURE

- Expitaxial planar type
- NPN Silicon Teansistor



SOT-23		
Dim	**Min**	**Max**
A	2.800	3.040
B	1.200	1.400
C	0.890	1.110
D	0.370	0.500
G	1.780	2.040
H	0.013	0.100
J	0.085	0.177
K	0.450	0.600
L	0.890	1.020
S	2.100	2.500
V	0.450	0.600
All Dimension in mm		

●Absolute maximum (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	60	V
Collector-emitter voltage	V_{CEO}	50	V
Emitter-base voltage	V_{EBO}	7	V
Collector current	I_C	0.15	A
Collector power dissipation	P_C	0.2	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55~+150	°C

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	60	–	–	V	I_C=50μA
Collector-emitter breakdown voltage	BV_{CEO}	50	–	–	V	I_C=1mA
Emitter-base breakdown voltage	BV_{EBO}	7	–	–	V	I_E=50μA
Collector cutoff current	I_{CBO}	–	–	0.1	μA	V_{CB}=60V
Emitter cutoff current	I_{EBO}	–	–	0.1	μA	V_{EB}=7V
DC current transfer ratio	h_{FE}	120	–	560	–	V_{CE}=6V, I_C=1mA
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	–	0.4	V	I_C/I_B=50mA/5mA
Transition frequency	f_T	–	180	–	MHz	V_{CE}=12V, I_E=–2mA, f=100MHz
Output capacitance	Cob	–	2	3.5	pF	V_{CE}=12V, I_E=0A, f=1MHz

h_{FE} values are classified as follows :

Item	Q	R	S
h_{FE}	120~270	180~390	270~560
Marking	BQ	BR	BS

Typical Characteristics

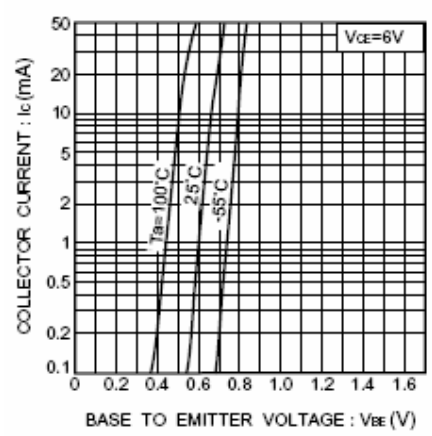


Fig.1 Grounded emitter propagation characteristics

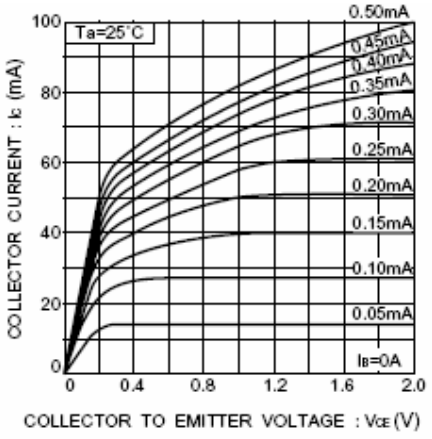


Fig.2 Grounded emitter output characteristics (I)

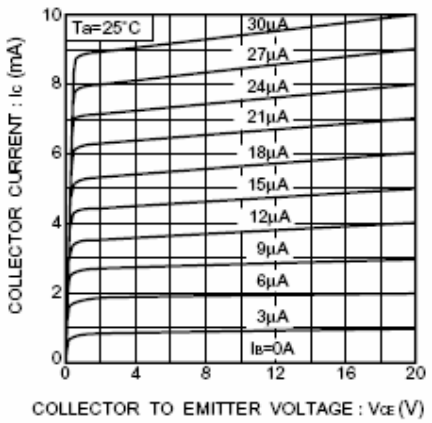


Fig.3 Grounded emitter output characteristics (II)

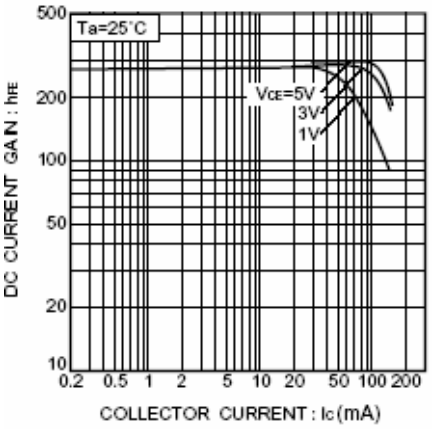


Fig.4 DC current gain vs. collector current (I)

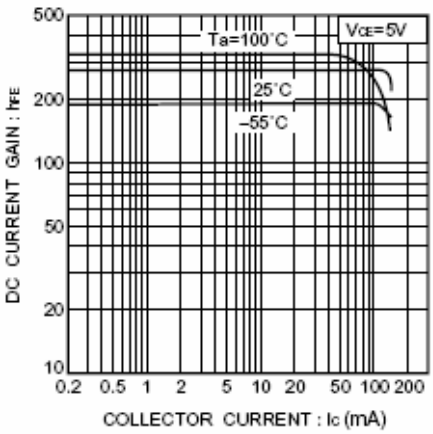


Fig.5 DC current gain vs. collector current (II)

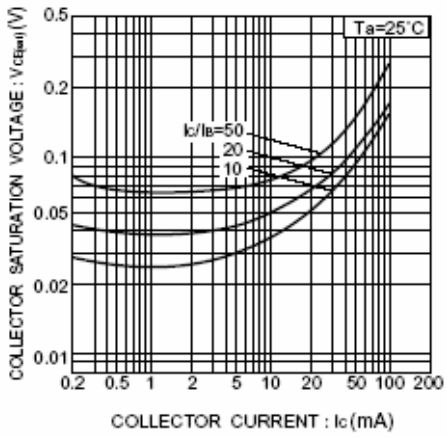


Fig. 6 Collector-emitter saturation voltage vs. collector current

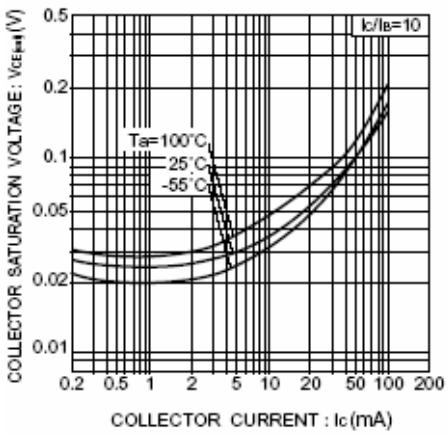


Fig.7 Collector-emitter saturation voltage vs. collector current (I)

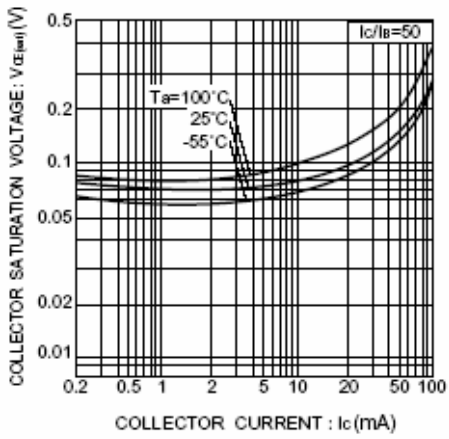


Fig.8 Collector-emitter saturation voltage vs. collector current (II)

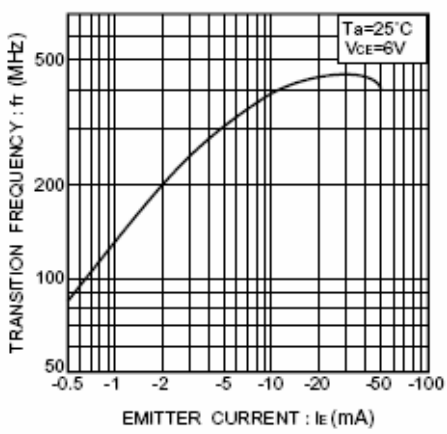


Fig.9 Gain bandwidth product vs. emitter current

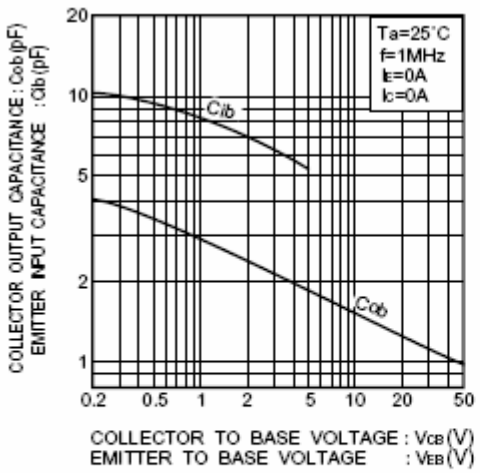


Fig.10 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

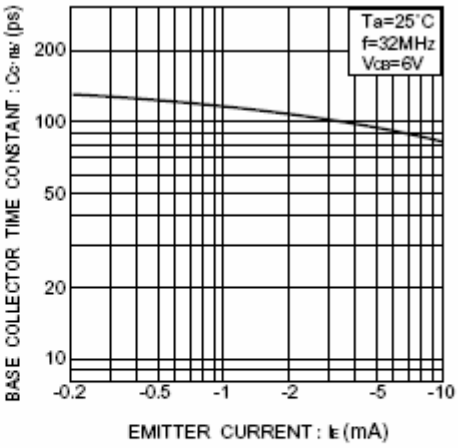


Fig.11 Base-collector time constant vs. emitter current