

NPN silicon

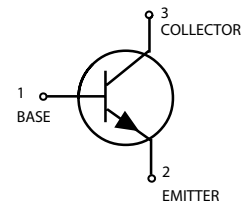
FEATURE

- Epitaxial planar type
- Complementary to 2SA1036K
- We declare that the material of product compliance with RoHS requirements.
Pb-Free package is available
 RoHS product for packing code suffix "G"
 Halogen free product for packing code suffix "H"



DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
2SC2411KQLT1	CQ	3000/Tape&Reel
2SC2411KR1T1	CR	3000/Tape&Reel



MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	40	V
Collector-emitter voltage	V_{CEO}	32	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	0.5	A*
Collector power dissipation	P_C	0.2	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55~+150	$^\circ\text{C}$

* P_C must not be exceeded.

ELECTRICAL CHARACTERISTICS($T_A = 25^\circ\text{C}$)

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	40	—	—	V	$I_C = 100\mu\text{A}$
Collector-emitter breakdown voltage	BV_{CEO}	32	—	—	V	$I_C = 1\text{mA}$
Emitter-base breakdown voltage	BV_{EBO}	5	—	—	V	$I_E = 100\mu\text{A}$
Collector cutoff current	I_{CBO}	—	—	1	μA	$V_{CB} = 20\text{V}$
Emitter cutoff current	I_{EBO}	—	—	1	μA	$V_{EB} = 4\text{V}$
DC current transfer ratio	h_{FE}	120	—	390	—	$V_{CE} = 3\text{V}, I_C = 100\text{mA}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.4	V	$I_C/I_E = 500\text{mA}/50\text{mA}$
Transition frequency	f_T	—	250	—	MHz	$V_{CE} = 5\text{V}, I_E = 20\text{mA}, f = 100\text{MHz}$
Output capacitance	C_{ob}	—	6.0	—	pF	$V_{CB} = 10\text{V}, I_E = 0\text{A}, f = 1\text{MHz}$

h_{FE} values are classified as follows:

Item	Q	R
h_{FE}	120~270	180~390



Electrical characteristic curves($T_A = 25^\circ\text{C}$)

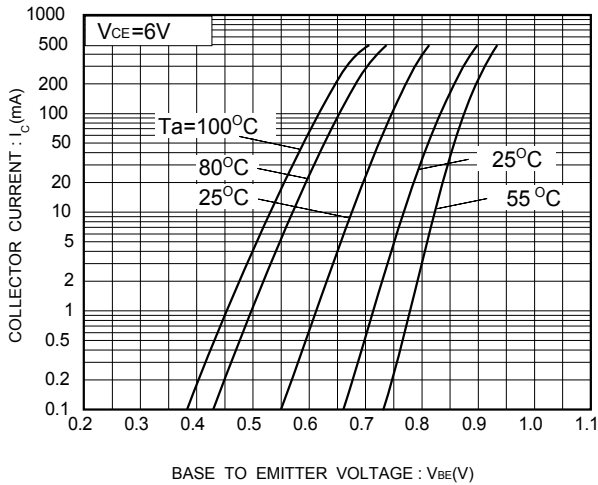


Fig.1 Grounded emitter propagation characteristics

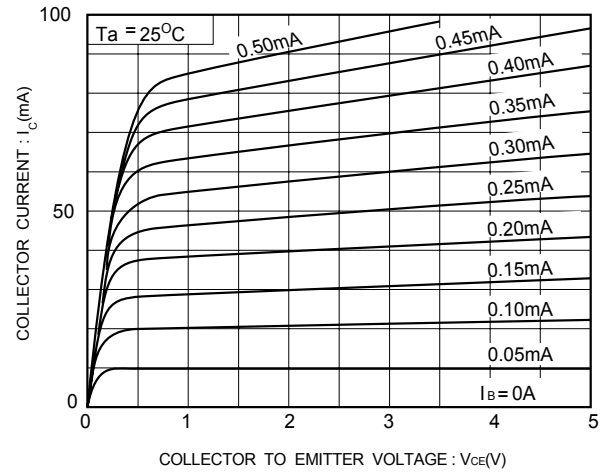


Fig.2 Grounded emitter output characteristics(I)

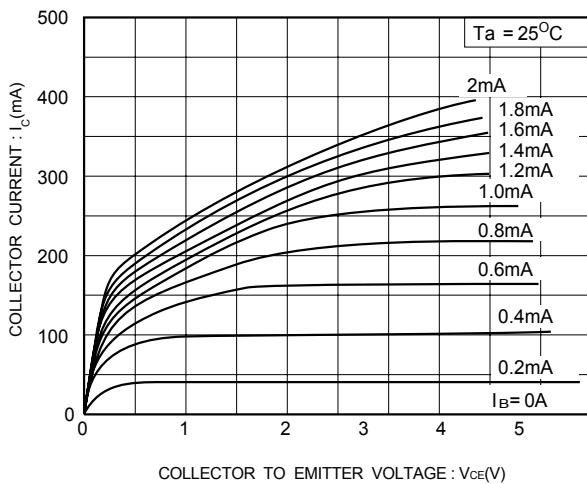


Fig.3 Grounded emitter output characteristics(II)

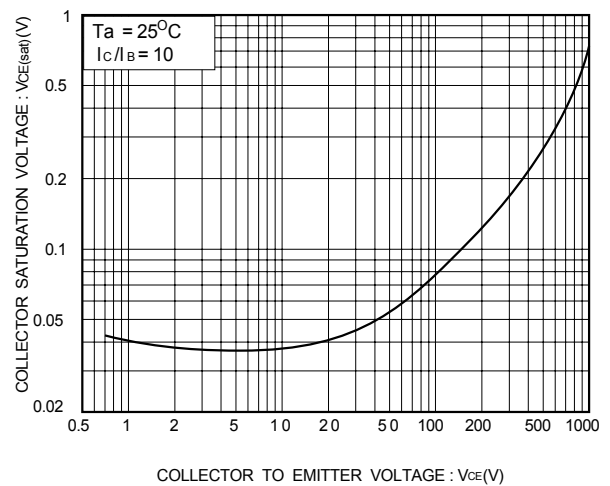


Fig.4 Collector-emitter saturation voltage vs. collector current

Electrical characteristic curves($T_A = 25^\circ\text{C}$)

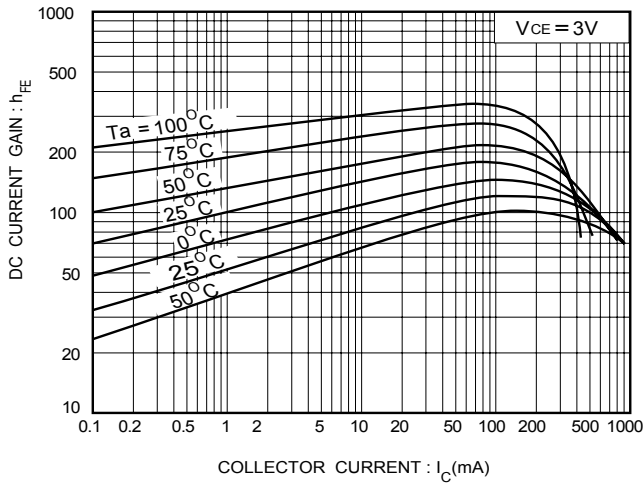


Fig.5 DC current gain vs. collector current

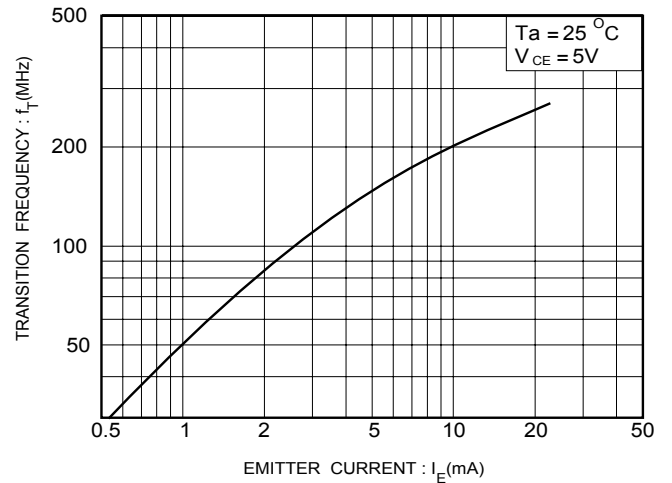


Fig.6 Gain bandwidth product vs. emitter current

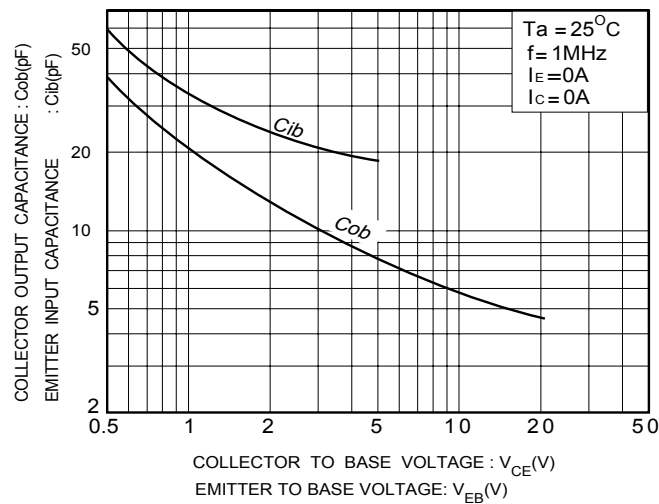
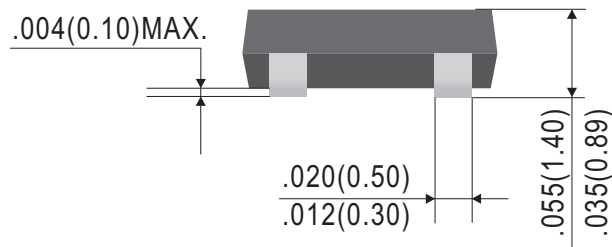
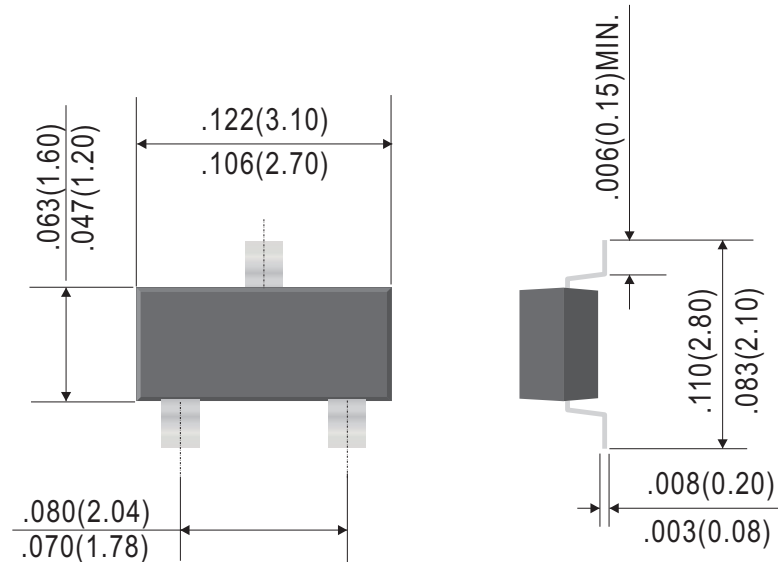


Fig.7 Collector output capacitance vs.
collector-base voltage
Emitter input capacitance vs.
emitter-base voltage

SOT-23



Dimensions in inches and (millimeters)

