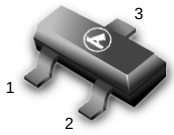
Medium Power Transistor
NPN silicon

L2SC2411K*LT1



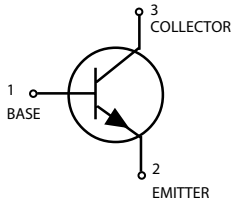
SOT– 23 (TO–236AB)

FEATURE

- Epitaxial planar type
- Complementary to L2SA1036K
- Pb-Free package is available

DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
L2SC2411KPLT1	CP	3000/Tape&Reel
L2SC2411KPLT1G (Pb-Free)	CP	3000/Tape&Reel
L2SC2411KQLT1	CQ	3000/Tape&Reel
L2SC2411KQLT1G (Pb-Free)	CQ	3000/Tape&Reel
L2SC2411KRLT1	CR	3000/Tape&Reel
L2SC2411KRLT1G (Pb-Free)	CR	3000/Tape&Reel



MAXIMUM RATINGS (T_A = 25°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	°C
Storage temperature	T_{stg}	-55~+150	°C

*P_C must not be exceeded.

ELECTRICAL CHARACTERISTICS(T_A = 25°C)

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	40	–	–	V	I_C=100μA
Collector-emitter breakdown voltage	BV_{CEO}	32	–	–	V	I_C=1mA
Emitter-base breakdown voltgae	BV_{EBO}	5	–	–	V	I_E=100μA
Collector cutoff current	I_{CBO}	–	–	1	μA	V_{CB}=20V
Emitter cutoff current	I_{EBO}	–	–	1	μA	V_{EB}=4V
DC current transfer ratio	h_{FE}	82	–	390	–	V_{CE}=3V
Collcetor-emitter saturation voltage	$V_{CE(sat)}$	–	–	0.4	V	I_C/I_B=500mA/50mA
Transition frequency	f_T	–	250	–	MHz	V_{CE}=5V,I_E=-20mA,f=100MHz
Output capacitance	C_{ob}	–	6.0	–	pF	V_{CB}=10V,I_E=0A,f=1MHz

h_{FE} values are classified as follows:

Item	P	Q	R
h_{FE}	82~180	120~270	180~390

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Electrical characteristic curves(T_A = 25°C)

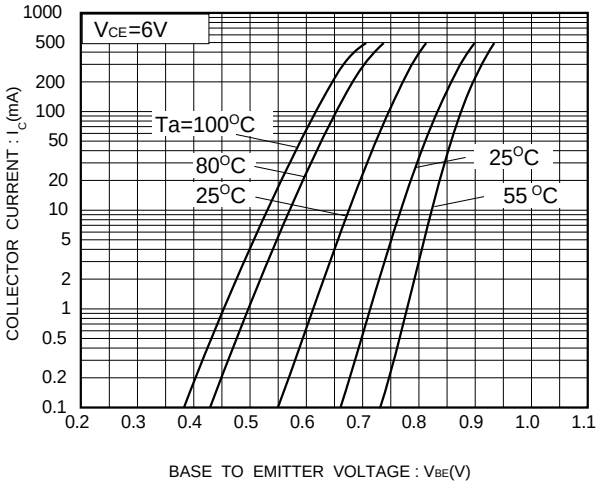

Fig.1 Grounded emitter propagation characteristics

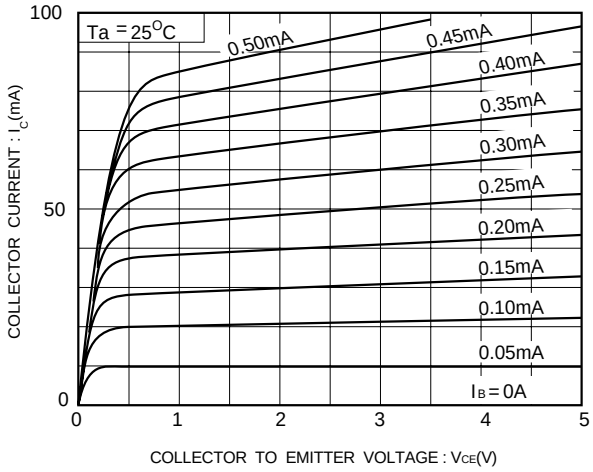

Fig.2 Grounded emitter output characteristics(I)

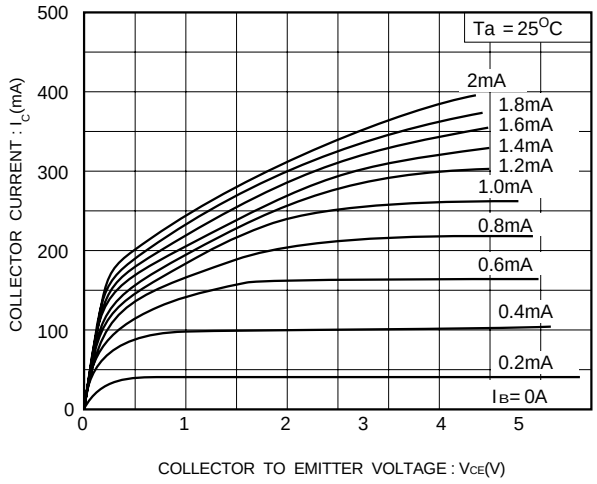

Fig.3 Grounded emitter output characteristics(II)

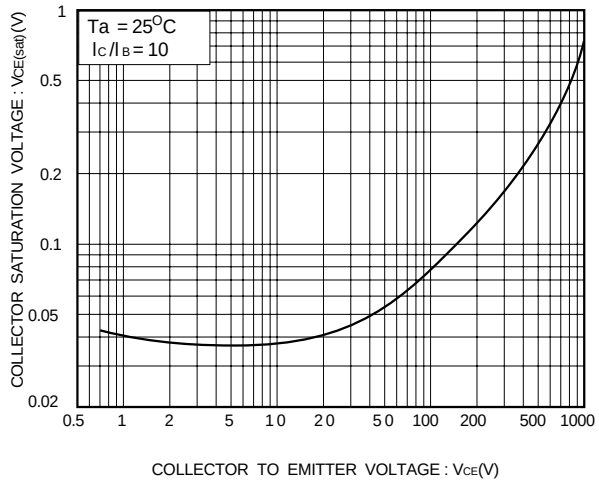

Fig.4 Collector-emitter saturation voltage vs. collector current

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Electrical characteristic curves(T_A = 25°C)

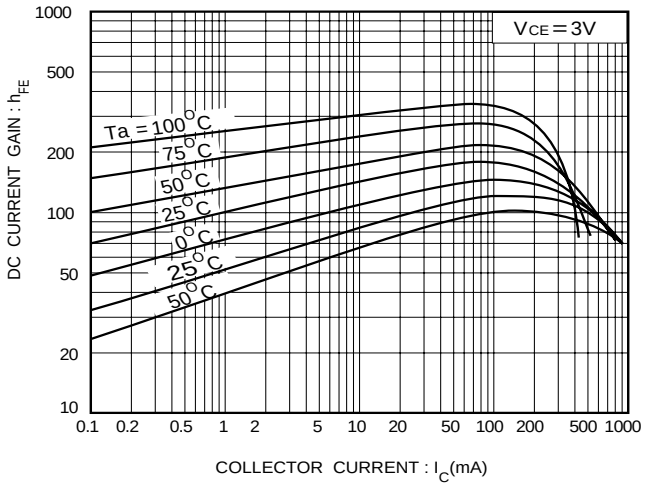

Fig.5 DC current gain vs. collector current

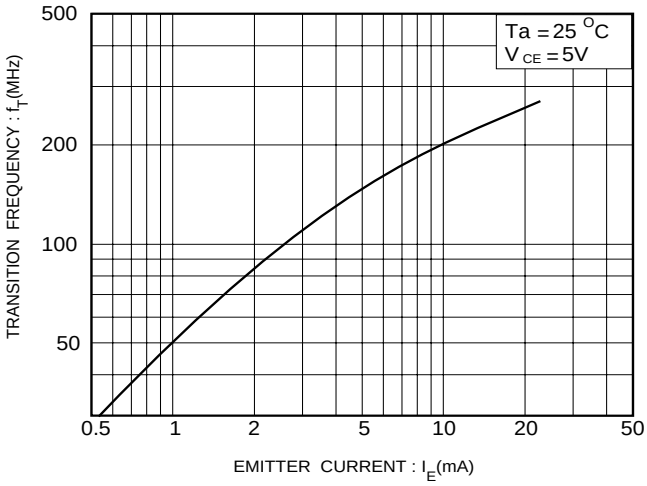

Fig.6 Gain bandwidth product vs. emitter current

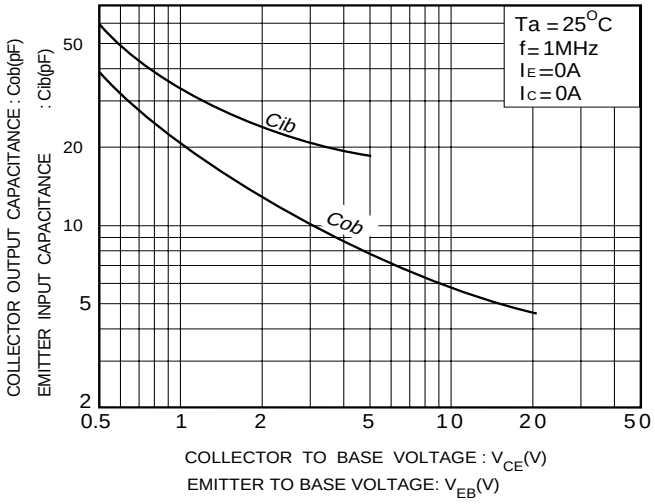

Fig.7 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

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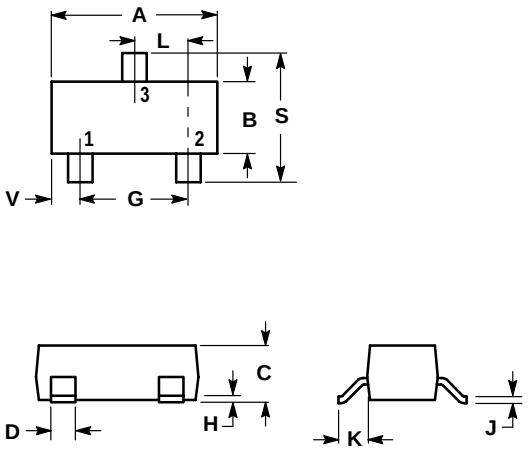

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60