

# Medium Power Transistor

## NPN silicon

### 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<sub>A</sub> = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V <sub>CBO</sub>	40	V
Collector-emitter voltage	V <sub>CEO</sub>	32	V
Emitter-base voltage	V <sub>EBO</sub>	5	V
Collector current	I <sub>C</sub>	0.5	A*
Collector power dissipation	P <sub>C</sub>	0.2	W
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55~+150	°C

\*P<sub>C</sub> must not be exceeded.

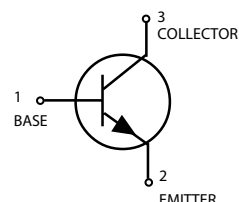
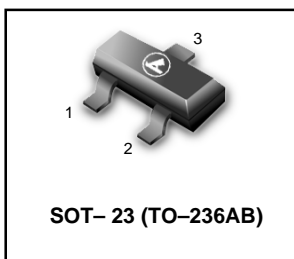
### ELECTRICAL CHARACTERISTICS(T<sub>A</sub> = 25°C)

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Collector-base breakdown voltage	BV <sub>CBO</sub>	40	—	—	V	I <sub>C</sub> =100μA
Collector-emitter breakdown voltage	BV <sub>CEO</sub>	32	—	—	V	I <sub>C</sub> =1mA
Emitter-base breakdown voltage	BV <sub>EBO</sub>	5	—	—	V	I <sub>E</sub> =100μA
Collector cutoff current	I <sub>CBO</sub>	—	—	1	μA	V <sub>CB</sub> =20V
Emitter cutoff current	I <sub>EBO</sub>	—	—	1	μA	V <sub>EB</sub> =4V
DC current transfer ratio	h <sub>FE</sub>	82	—	390	—	V <sub>CE</sub> =3V
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	—	—	0.4	V	I <sub>C</sub> /I <sub>B</sub> =500mA/50mA
Transition frequency	f <sub>T</sub>	—	250	—	MHz	V <sub>CE</sub> =5V, I <sub>E</sub> =20mA, f=100MHz
Output capacitance	C <sub>ob</sub>	—	6.0	—	pF	V <sub>CB</sub> =10V, I <sub>E</sub> =0A, f=1MHz

h<sub>FE</sub> values are classified as follows:

Item	P	Q	R
h <sub>FE</sub>	82~180	120~270	180~390

**L2SC2411K\*LT1**



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

**L2SC2411K\*LT1**

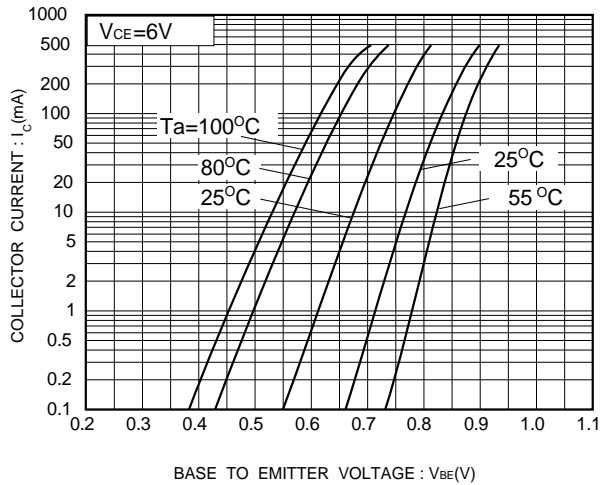


Fig.1 Grounded emitter propagation characteristics

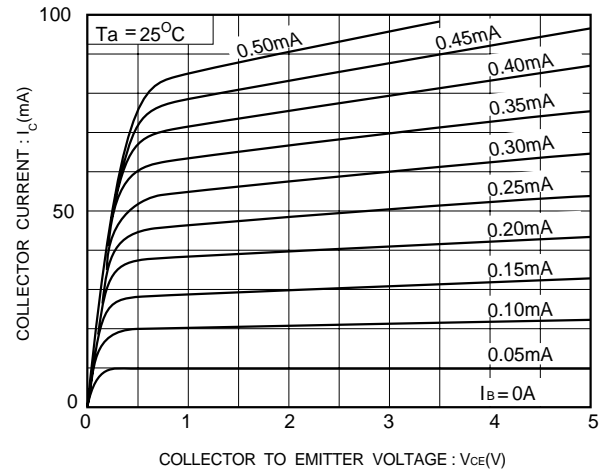


Fig.2 Grounded emitter output characteristics(I)

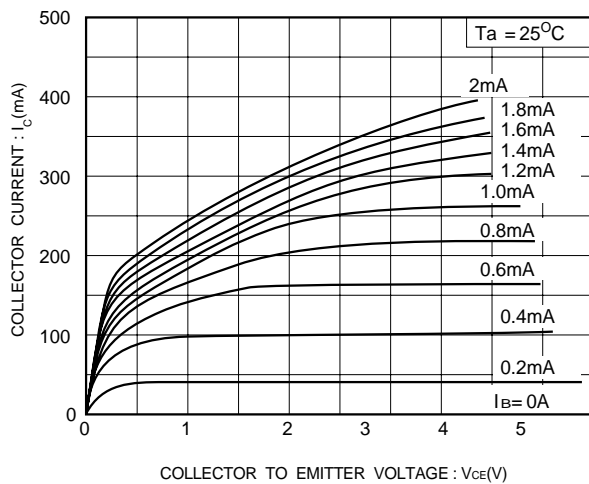


Fig.3 Grounded emitter output characteristics(II)

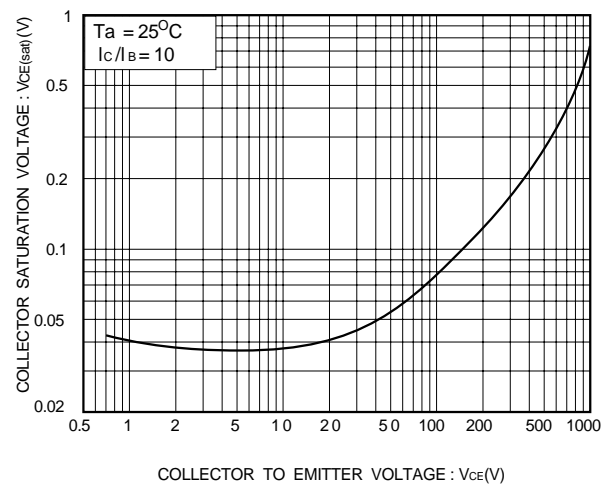


Fig.4 Collector-emitter saturation voltage vs. collector current

## L2SC2411K\*LT1

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

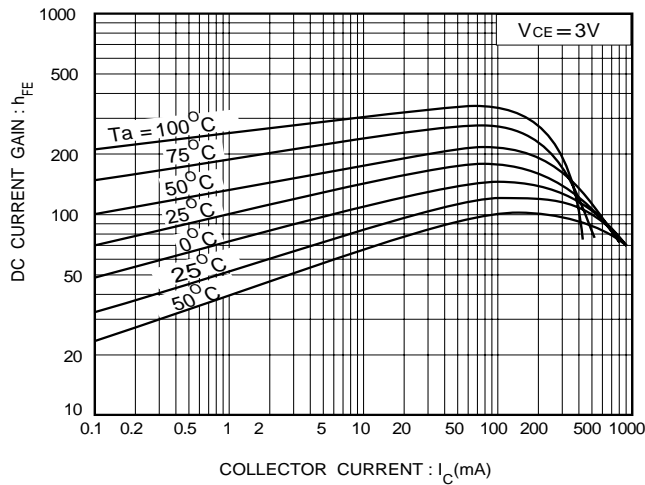


Fig.5 DC current gain vs. collector current

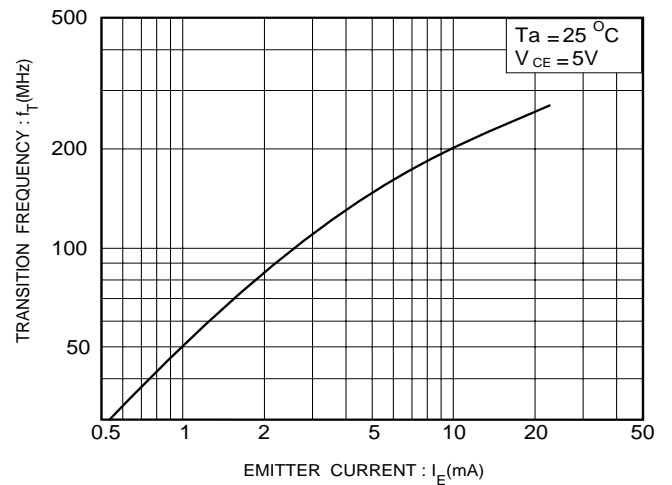


Fig.6 Gain bandwidth product vs. emitter current

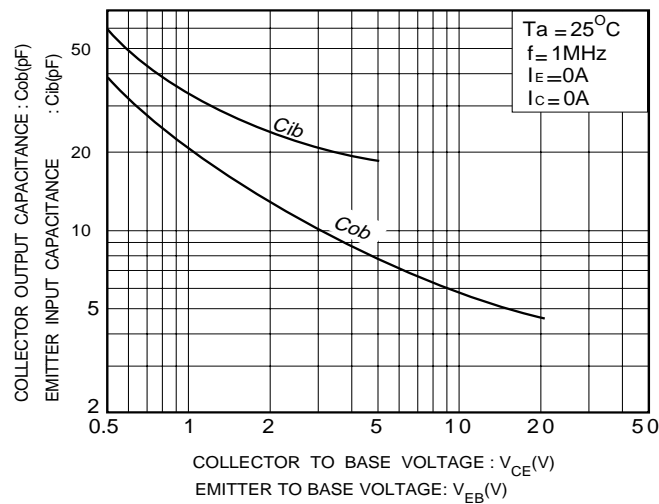
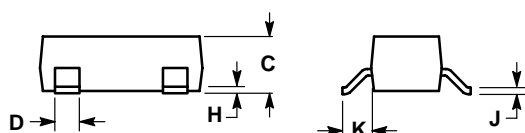
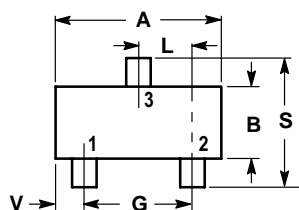


Fig.7 Collector output capacitance vs. collector-base voltage  
Emitter input capacitance vs. emitter-base voltage

**L2SC2411K\*LT1**
**SOT-23**

**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

