

# Medium Power Transistor

## (-32V, -0.5A)

### L2SA1036KQLT1G Series

#### ●Features

- 1) Large  $I_c$ .  
 $I_{cMax.} = -500mA$
- 2) Low  $V_{CE(sat)}$ . Ideal for low-voltage operation.
- 3) We declare that the material of product compliance with RoHS requirements.
- 4) S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

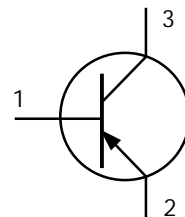
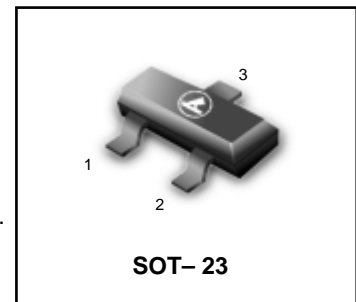
#### ●Structure

Epitaxial planar type  
PNP silicon transistor

#### ●DEVICE MARKING

- 1) L2SA1036KQLT1G=HQ  
S-L2SA1036KQLT1G=HQ
- 2) L2SA1036KRLT1G=HR  
S-L2SA1036KRLT1G=HR

#### L2SA1036KQLT1G Series S-L2SA1036KQLT1G Series



**PNP**

#### ●Absolute maximum ratings ( $T_a = 25^\circ C$ )

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	$^\circ C$
Storage temperature	$T_{stg}$	-55~+150	$^\circ C$

\*  $P_c$  MAX. must not be exceeded.

#### ●ORDERING INFORMATION

Device	Package	Shipping
L2SA1036K*LT1G	SOT-23	3000/Tape & Reel
L2SA1036K*LT3G	SOT-23	10000/Tape & Reel

## L2SA1036KQLT1G Series S-L2SA1036KQLT1G Series

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV <sub>CB0</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>CB0</sub>	—	—	- 1	μA	V <sub>CB</sub> = - 20v
Emitter cutoff current	I <sub>EBO</sub>	—	—	- 1	μA	V <sub>EB</sub> = - 4V
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	—	—	- 0.4	V	I <sub>C</sub> /I <sub>B</sub> = - 100mA/ - 10mA
DC current transfer ration	h <sub>FE</sub>	120	—	390	—	V <sub>CE</sub> = - 3V, I <sub>C</sub> = - 10mA
Transition frequence	f <sub>T</sub>	—	200	—	MHz	V <sub>CE</sub> = - 5V, I <sub>E</sub> =20mA, f=100MHz
Output capacitance	C <sub>ob</sub>	—	7	—	pF	V <sub>CB</sub> = - 10V, I <sub>E</sub> =0A, f=1MHz

●hFE values are classified as follows.

Item	Q	R
Hfe	120~270	180~390

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● Electrical characteristic curves

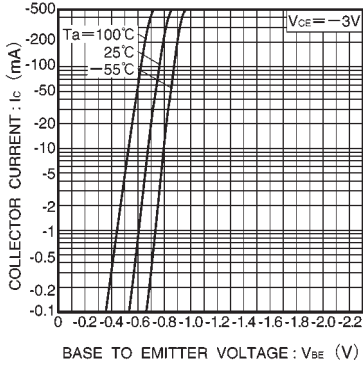


Fig.1 Grounded emitter propagation

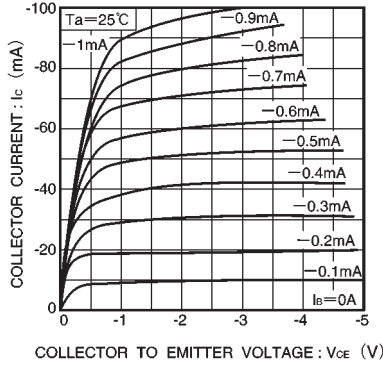


Fig.2 Grounded emitter output characteristics ( I )

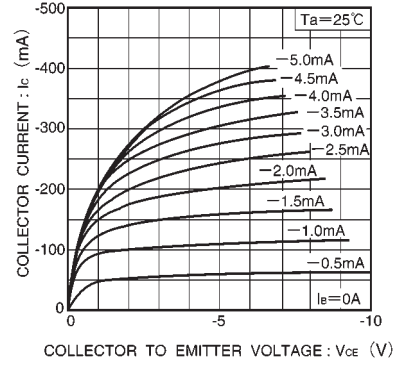


Fig.3 Grounded emitter output characteristics ( II )

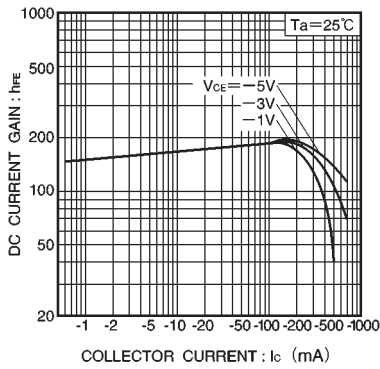


Fig.4 DC current gain vs. collector current ( I )

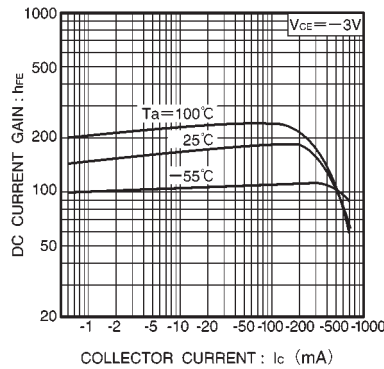


Fig.5 DC current gain vs. collector current ( II )

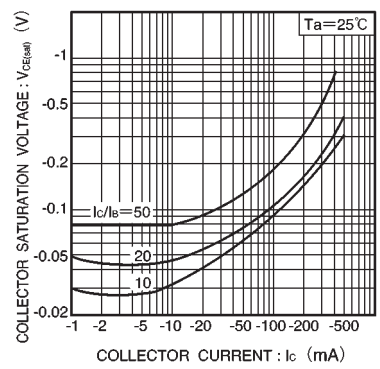


Fig.6 Collector-emitter saturation voltage vs. collector current ( I )

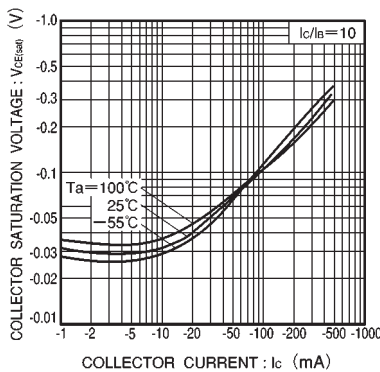


Fig.7 Collector-emitter saturation voltage vs. collector current ( II )

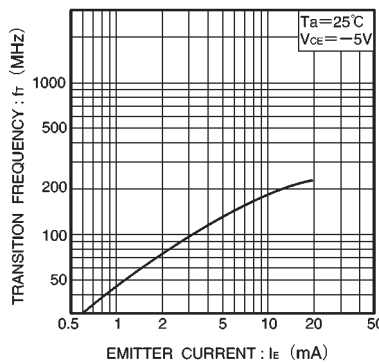


Fig.8 Gain bandwidth product vs. emitter current

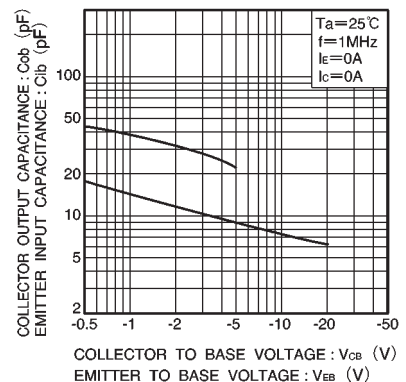
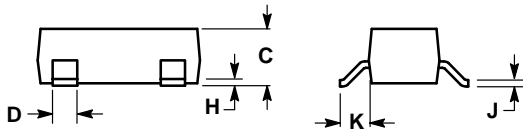
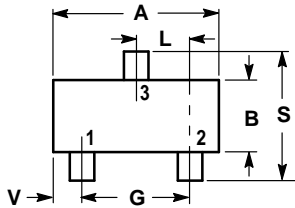


Fig.9 Collector output capacitance vs. collector-base voltage. Emitter input capacitance vs. emitter-base voltage

# L2SA1036KQLT1G Series S-L2SA1036KQLT1G Series

## SOT-23



### NOTES:

- DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
- 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

- PIN 1. BASE  
2. EMITTER  
3. COLLECTOR

