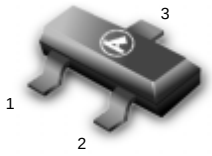
Medium Power Transistor
(−32V, −0.5A)
L2SA1036KQLT1G Series

L2SA1036KQLT1G Series
S-L2SA1036KQLT1G Series



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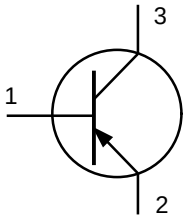
●Features

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



PNP

●DEVICE MARKING

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

●Absolute maximum ratings (Ta = 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	Tj	150	℃	
Storage temperature	Tstg	−55～+150	℃	

* $P_{C\ MAX.}$ 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_{CBO}	— 40	—	—	V	I_C= — 100μA
Collector-emitter breakdown voltage	BV_{CEO}	— 32	—	—	V	Ic= — 1mA
Emitter-base breakdown voltage	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
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	— 0.4	V	I_C/I_B= — 100mA/ — 10mA
DC current transfer ration	h_{FE}	120	—	390	—	V_{CE}= — 3V,Ic= — 10mA
Transition frequence	f_T	—	200	—	MHz	V_{CE}= — 5V,I_E=20mA,f=100MHz
Output capacitance	Cob	—	7	—	pF	V_{CB}= — 10V,I_E=0A,f=1MHz

●hFE values are classified as follows.

Item	Q	R
Hfe	120~270	180~390

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●Electrical characteristic curves

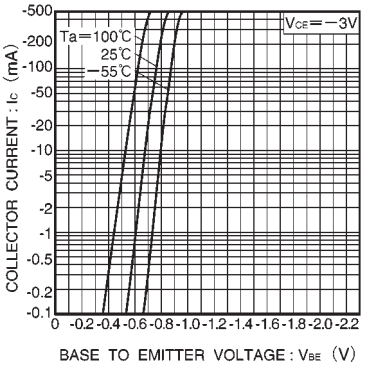

Fig.1 Grounded emitter propagation

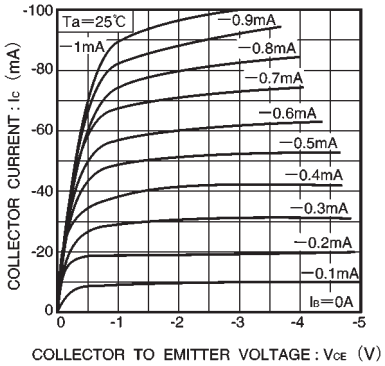

Fig.2 Grounded emitter output characteristics (Ⅰ)

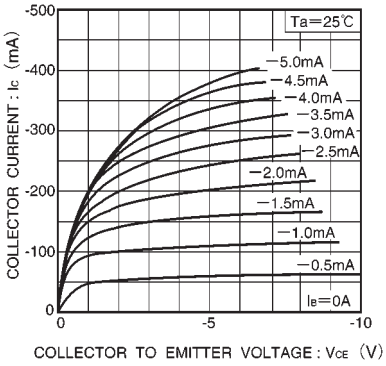

Fig.3 Grounded emitter output characteristics (Ⅱ)

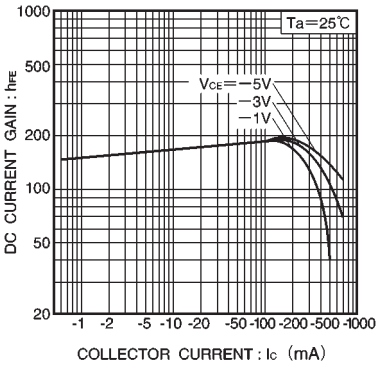

Fig.4 DC current gain vs. collector current (Ⅰ)

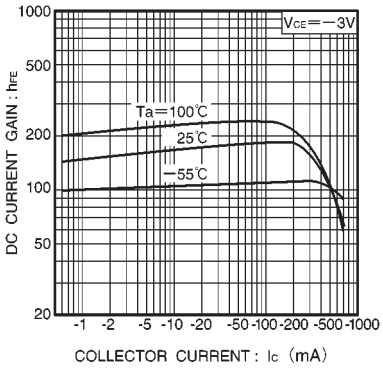

Fig.5 DC current gain vs. collector current (Ⅱ)

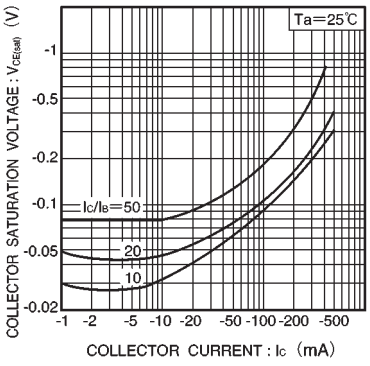

Fig.6 Collector-emitter saturation voltage vs. collector current (Ⅰ)

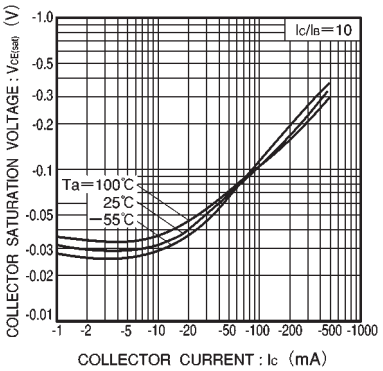

Fig.7 Collector-emitter saturation voltage vs. collector current (Ⅱ)

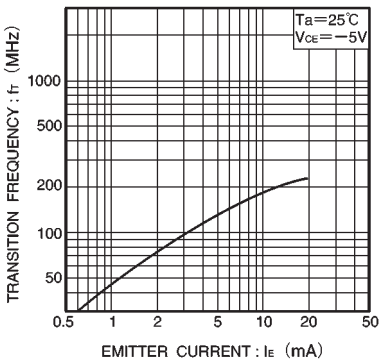

Fig.8 Gain bandwidth product vs. emitter current

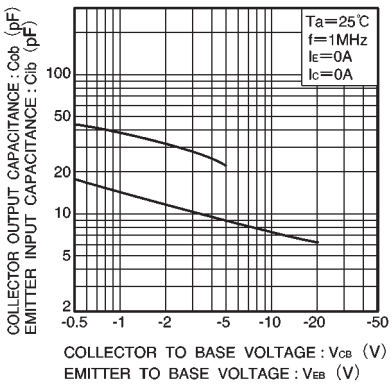

Fig.9 Collector output capacitance vs. collector-base voltage. Emitter input capacitance vs. emitter-base voltage

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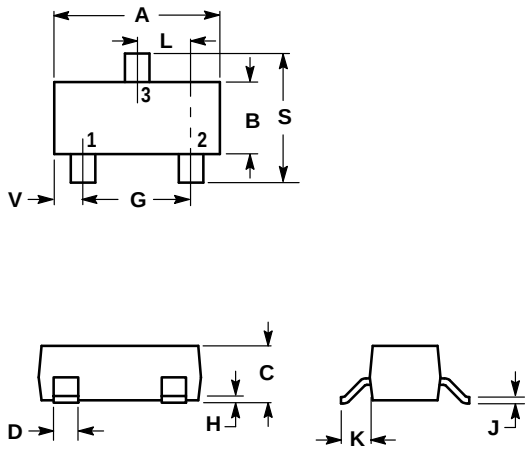

NOTES:

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

PIN 1. BASE
2. EMITTER
3. COLLECTOR