

# General Purpose Transistors

## PNP Silicon

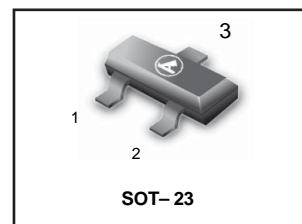
### Features

- We declare that the material of product compliance with RoHS requirements.
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

**L2SA1037AKQLT1G Series**  
**S-L2SA1037AKQLT1G Series**

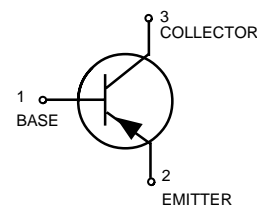
### ORDERING INFORMATION

Device	Package	Shipping
L2SA1037AKQLT1G S-L2SA1037AKQLT1G	SOT23	3000/Tape & Reel
L2SA1037AKQLT3G S-L2SA1037AKQLT3G	SOT23	10000/Tape & Reel



### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CEO}$	-50	V
Collector-Base Voltage	$V_{CBO}$	-60	V
Emitter-Base Voltage	$V_{EBO}$	-6.0	V
Collector Current — Continuous	$I_C$	-150	mA <sub>dc</sub>
Collector power dissipation	$P_C$	0.2	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C



### DEVICE MARKING

L2SA1037AKQLT1G =FQ L2SA1037AKSLT1G=G3F L2SA1037AKRLT1G=FR

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted.)

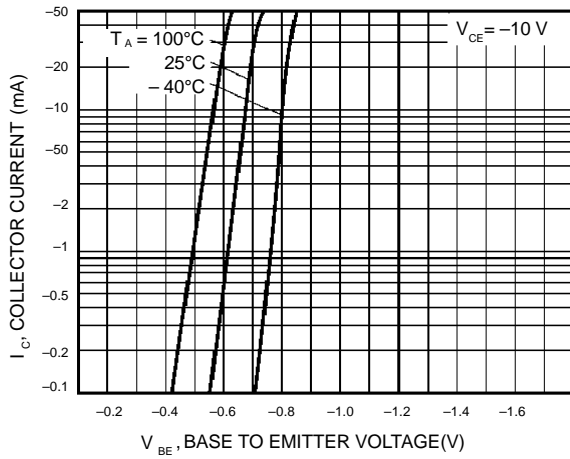
Characteristic	Symbol	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage ( $I_C = -1\text{ mA}$ )	$V_{(BR)CEO}$	-50	—	—	V
Emitter-Base Breakdown Voltage ( $I_E = -50\ \mu\text{A}$ )	$V_{(BR)EBO}$	-6	—	—	V
Collector-Base Breakdown Voltage ( $I_C = -50\ \mu\text{A}$ )	$V_{(BR)CBO}$	-60	—	—	V
Collector Cutoff Current ( $V_{CB} = -60\text{ V}$ )	$I_{CBO}$	—	—	-0.1	$\mu\text{A}$
Emitter cutoff current ( $V_{EB} = -6\text{ V}$ )	$I_{EBO}$	—	—	-0.1	$\mu\text{A}$
Collector-emitter saturation voltage ( $I_C / I_B = -50\text{ mA} / -5\text{ mA}$ )	$V_{CE(sat)}$	—	—	-0.5	V
DC current transfer ratio ( $V_{CE} = -6\text{ V}, I_C = -1\text{ mA}$ )	$h_{FE}$	120	—	560	—
Transition frequency ( $V_{CE} = -12\text{ V}, I_E = 2\text{ mA}, f = 30\text{ MHz}$ )	$f_T$	—	140	—	MHz
Output capacitance ( $V_{CB} = -12\text{ V}, I_E = 0\text{ A}, f = 1\text{ MHz}$ )	$C_{ob}$	—	4.0	5.0	pF

### $h_{FE}$ values are classified as follows:

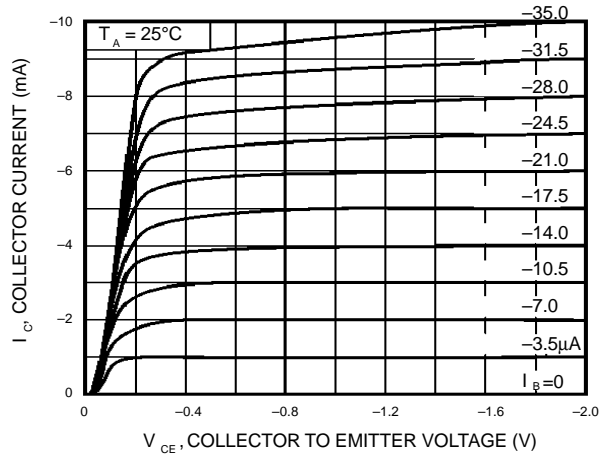
*	Q	R	S
$h_{FE}$	120-270	180-390	270-560

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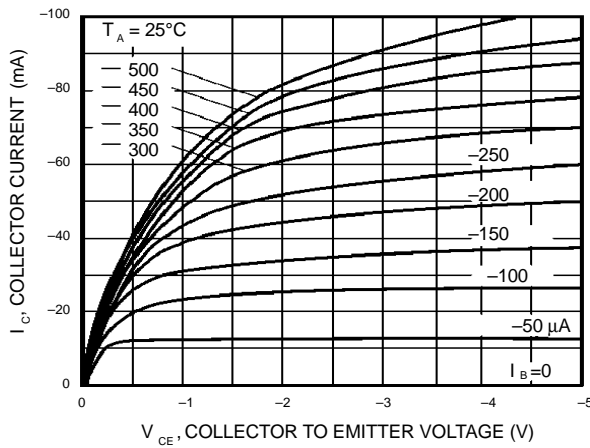
**Fig.1 Grounded emitter propagation characteristics**



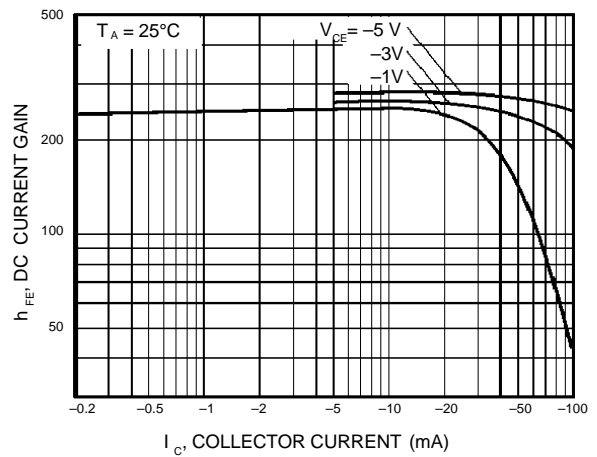
**Fig.2 Grounded emitter output characteristics(I)**



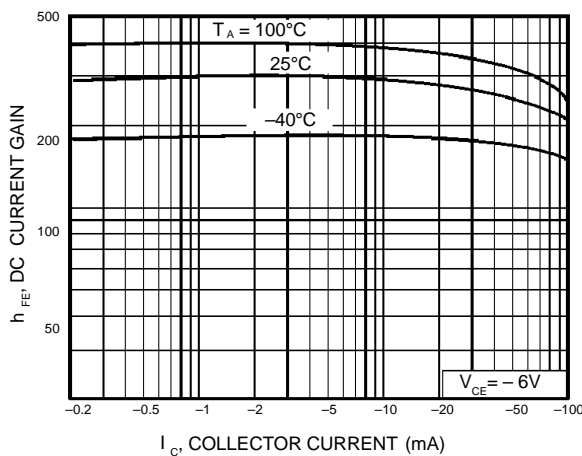
**Fig.3 Grounded emitter output characteristics(II)**



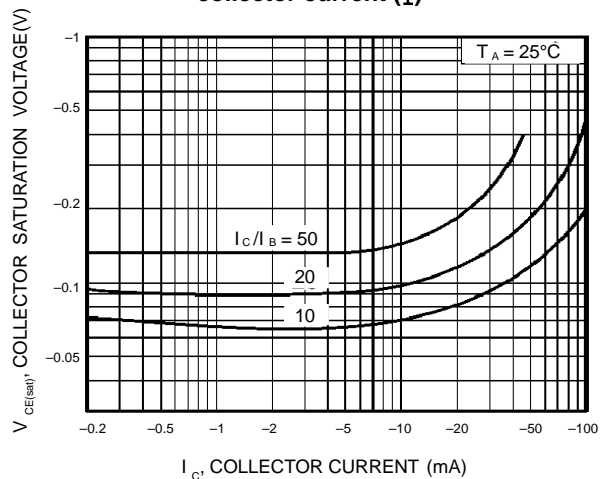
**Fig.4 DC current gain vs. collector current (I)**



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

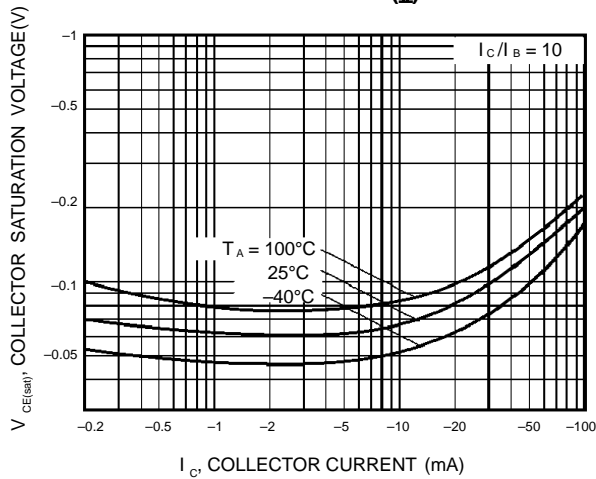


**Fig.6 Collector-emitter saturation voltage vs. collector current (I)**

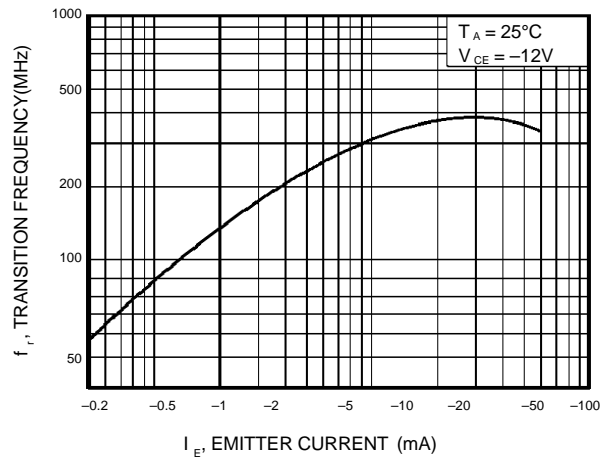


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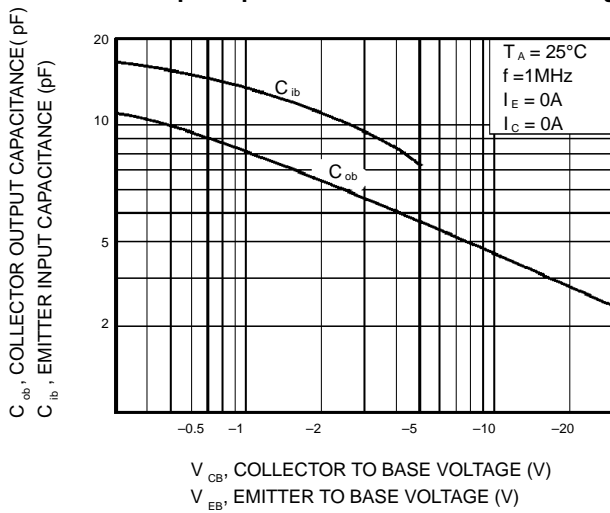
**Fig.7 Collector-emitter saturation voltage vs. collector current (I)**



**Fig.8 Gain bandwidth product vs. emitter current**



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

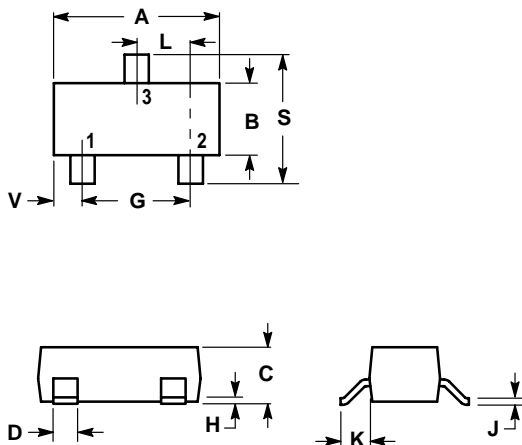


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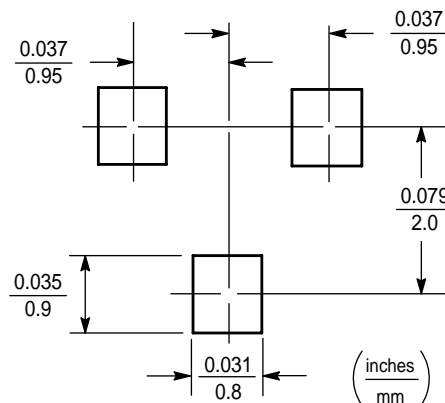
**SOT-23**

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



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