

# General Purpose Transistors

## PNP Silicon

- 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.

### L2SA1576AQT1G Series S-L2SA1576AQT1G Series

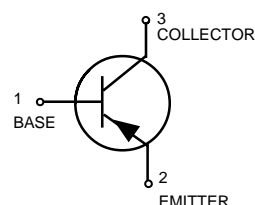
#### ORDERING INFORMATION

Device	Package	Shipping
L2SA1576AQT1G Series S-L2SA1576AQT1G Series	SC-70	3000/Tape & Reel
L2SA1576AQT3G Series S-L2SA1576AQT3G Series	SC-70	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	mAdc
Collector power dissipation	$P_C$	0.15	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C



#### DEVICE MARKING

L2SA1576AQT1G =FQ L2SA1576ART1G=FR L2SA1576AST1G =FS

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

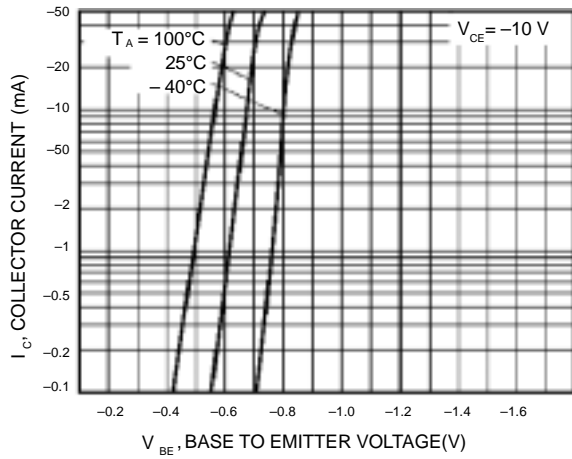
Characteristic	Symbol	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage ( $I_C = -1\text{ mA}$ )	$V_{(BR)CEO}$	- 50	—	—	V
Emitter-Base Breakdown Voltage ( $I_E = - 50\ \mu\text{A}$ )	$V_{(BR)EBO}$	- 6	—	—	V
Collector-Base Breakdown Voltage ( $I_C = - 50\ \mu\text{A}$ )	$V_{(BR)CBO}$	- 60	—	—	V
Collector 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:

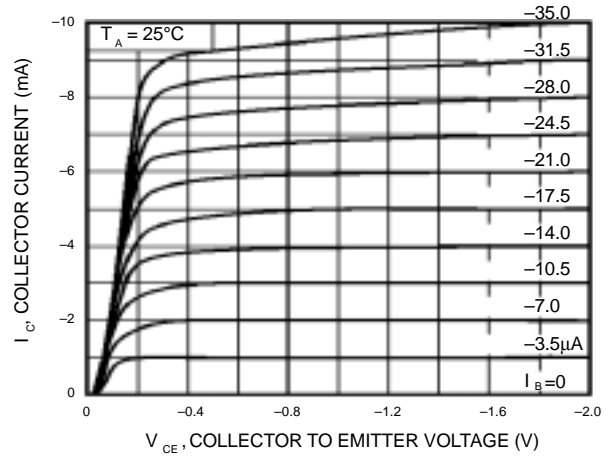
*	Q	R	S
$h_{FE}$	120-270	180-390	270-560

**L2SA1576AQT1G Series**  
**S-L2SA1576AQT1G Series**

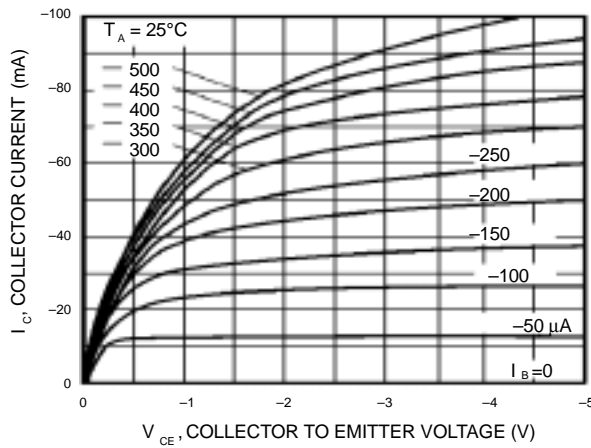
**Fig.1 Grounded emitter propagation characteristics**



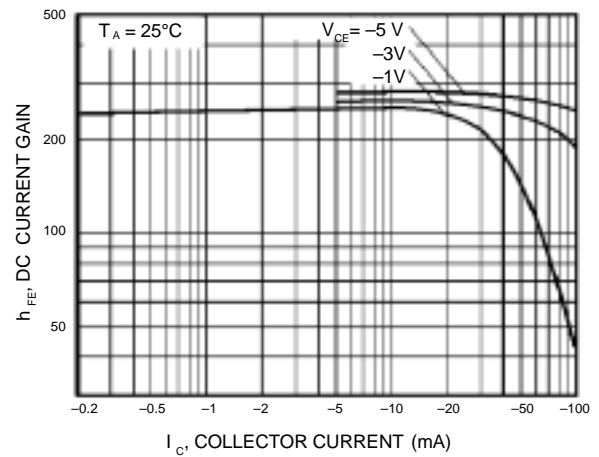
**Fig.2 Grounded emitter output characteristics(I)**



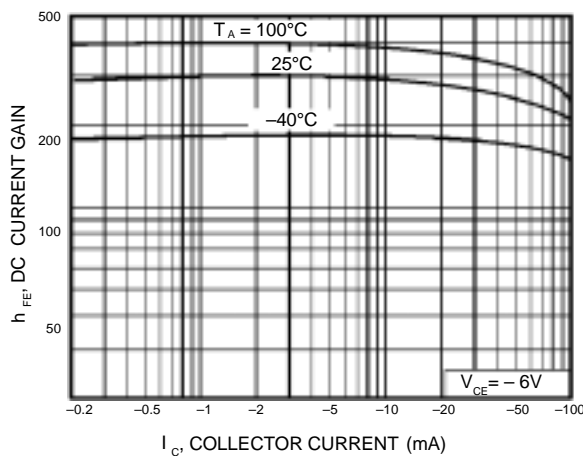
**Fig.3 Grounded emitter output characteristics(II)**



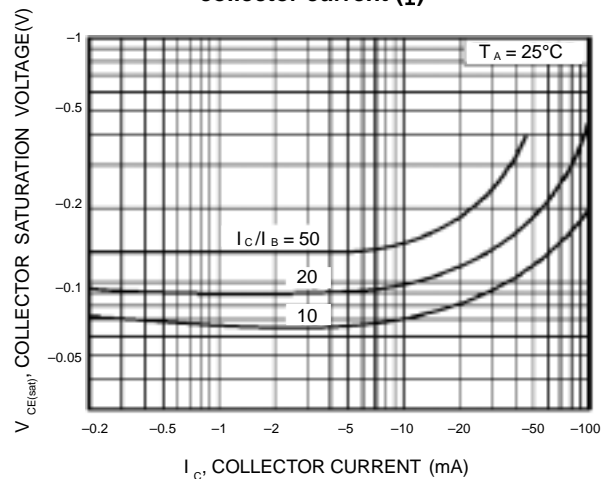
**Fig.4 DC current gain vs. collector current (I)**



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

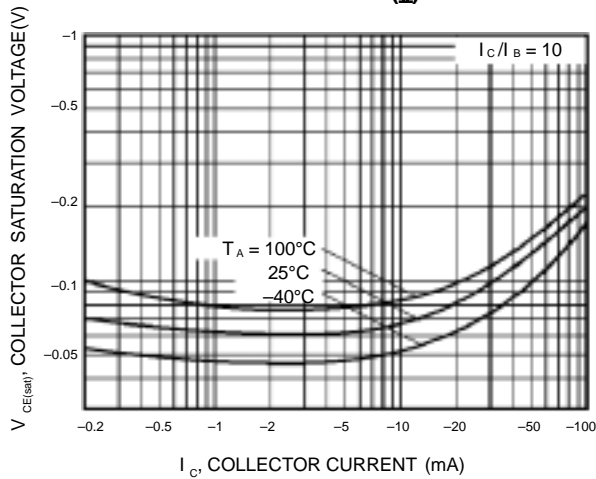


**Fig.6 Collector-emitter saturation voltage vs. collector current (I)**

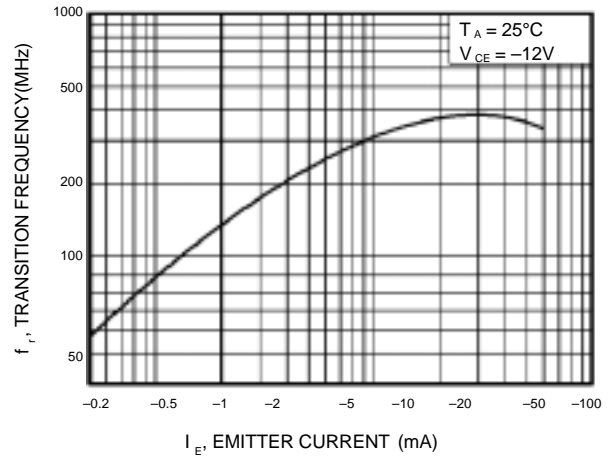


**L2SA1576AQT1G Series**  
**S-L2SA1576AQT1G Series**

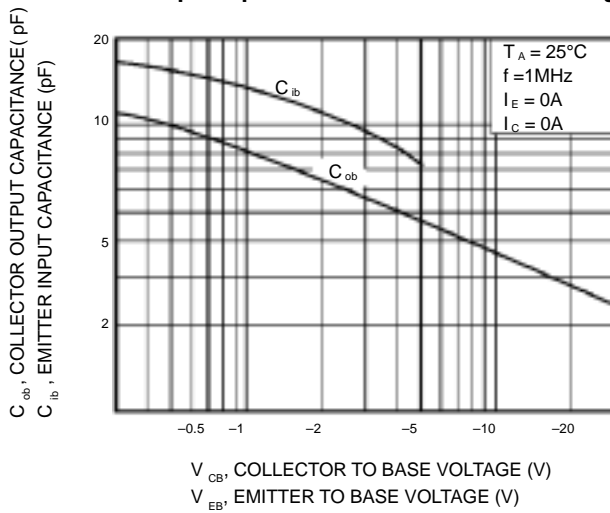
**Fig.7 Collector-emitter saturation voltage vs. collector current (I)**



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

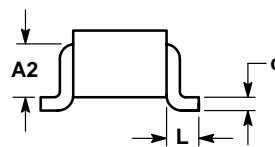
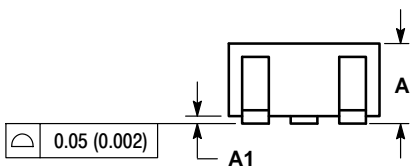
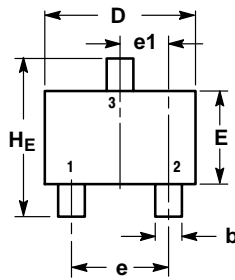


**Fig.9 Collector output capacitance vs. collector-base voltage**  
**Emitter input capacitance vs. emitter-base voltage**



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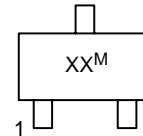
**SC-70/SOT-323**



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

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A2	0.7 REF			0.028 REF		
b	0.30	0.35	0.40	0.012	0.014	0.016
c	0.10	0.18	0.25	0.004	0.007	0.010
D	1.80	2.10	2.20	0.071	0.083	0.087
E	1.15	1.24	1.35	0.045	0.049	0.053
e	1.20	1.30	1.40	0.047	0.051	0.055
e1	0.65 BSC			0.026 BSC		
L	0.425 REF			0.017 REF		
HE	2.00	2.10	2.40	0.079	0.083	0.095

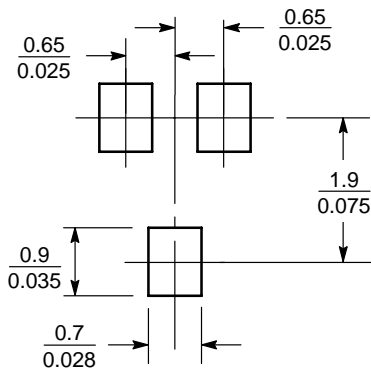
**GENERIC MARKING DIAGRAM**



- XX = Specific Device Code
- M = Date Code
- = Pb-Free Package

\*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present.

**SOLDERING FOOTPRINT\***



SCALE 10:1 (mm/inches)