

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.

ORDERING INFORMATION

Device	Package	Shipping
2SA1576A Series S-2SA1576A Series	SOT-323	3000/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

h_{FE} values are classified as follows:

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

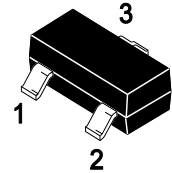
DEVICE MARKING

2SA1576AQ=FQ	2SA1576AR=FR	2SA1576AS =FS
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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	μA
Emitter cutoff current ($V_{EB} = -6\text{ V}$)	I_{EBO}	—	—	- 0.1	μA
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

2SA1576A Series S-2SA1576A Series



SOT-323

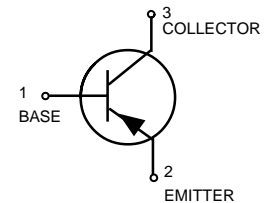


Fig.1 Grounded emitter propagation characteristics

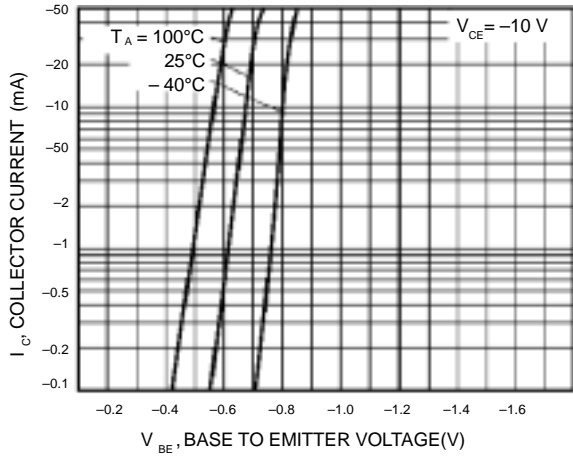


Fig.2 Grounded emitter output characteristics(I)

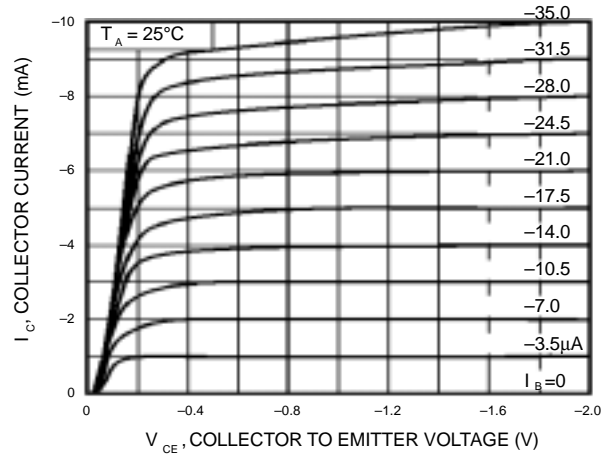


Fig.3 Grounded emitter output characteristics(II)

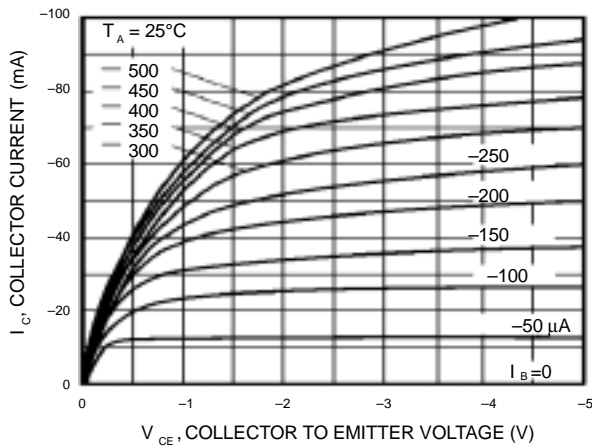


Fig.4 DC current gain vs. collector current (I)

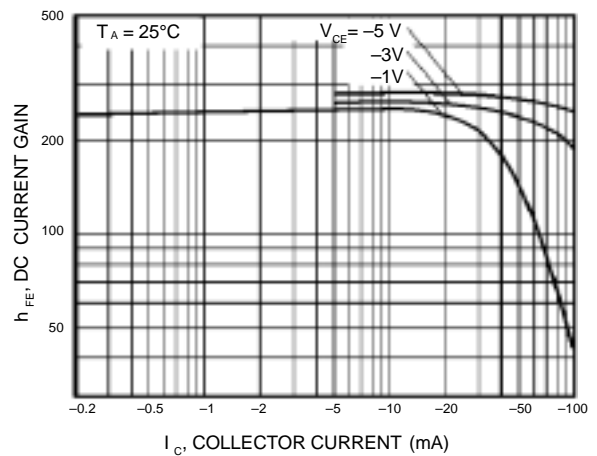


Fig.5 DC current gain vs. collector current (II)

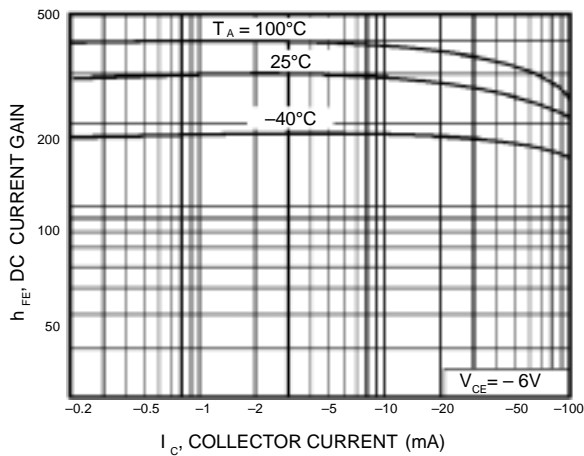


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

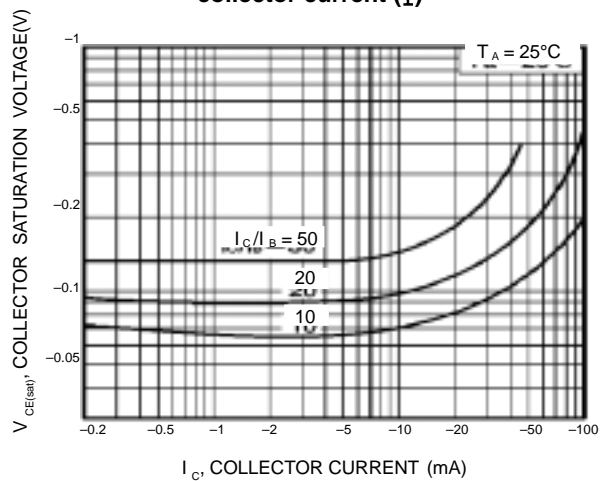


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

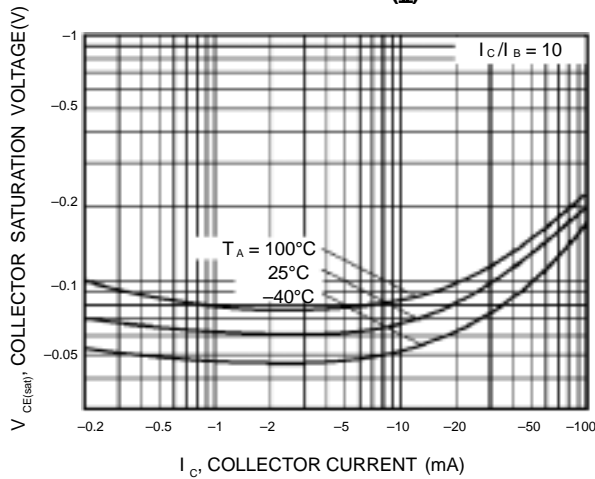
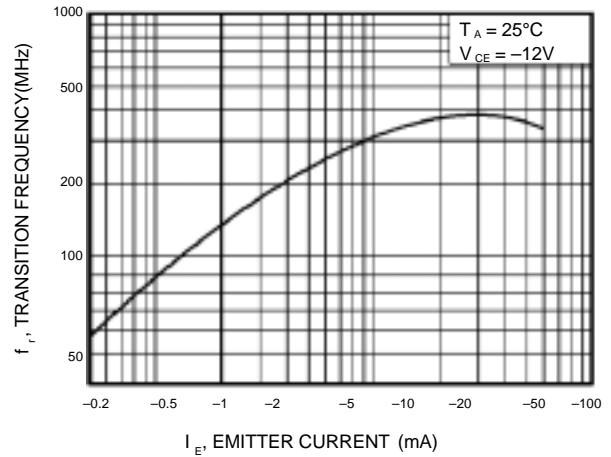
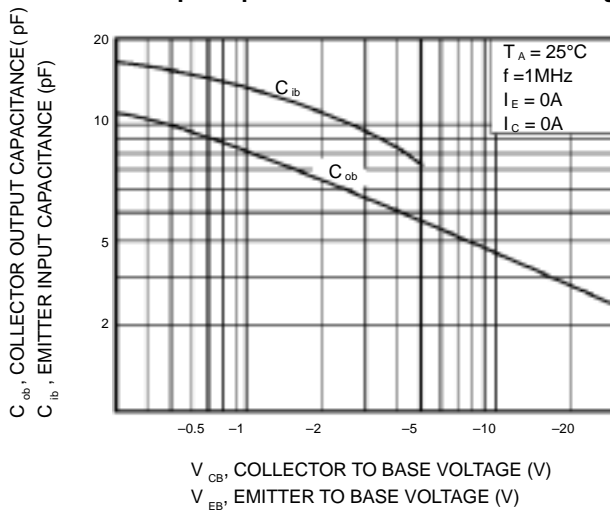


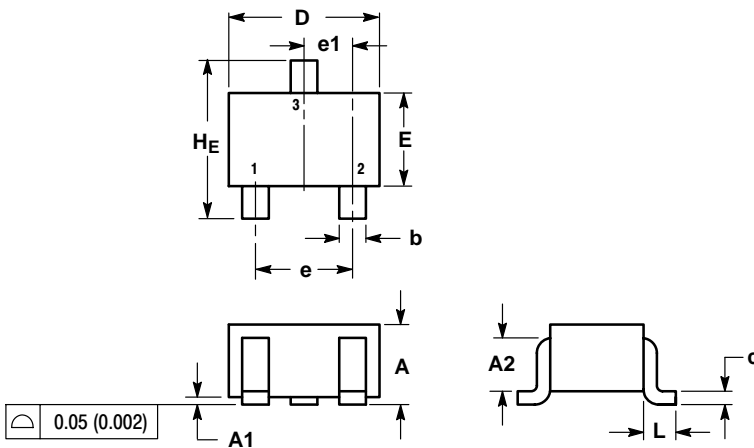
Fig.8 Gain bandwidth product vs. emitter current



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



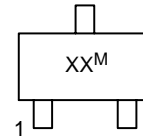
SOT-323



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		
H _E	2.00	2.10	2.40	0.079	0.083	0.095

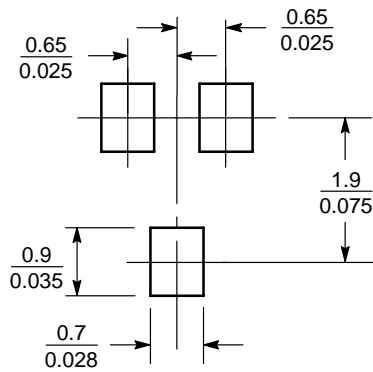
GENERIC MARKING DIAGRAM



- 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)

