



Micro Commercial Components



Micro Commercial Components  
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**2SA1576A-Q**  
**2SA1576A-R**  
**2SA1576A-S**

**Features**

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Excellent  $h_{FE}$  Linearity
- Complementary to 2SC4081
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

**Maximum Ratings**

Symbol	Rating	Rating	Unit
$V_{CEO}$	Collector-Emitter Voltage	-50	V
$V_{CBO}$	Collector-Base Voltage	-60	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_C$	Collector Current	-150	mA
$P_C$	Collector power dissipation	200	mW
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{STG}$	Storage Temperature	-55 to +150	$^{\circ}C$

**Electrical Characteristics @ 25 $^{\circ}C$  Unless Otherwise Specified**

Symbol	Parameter	Min	Typ	Max	Units
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**OFF CHARACTERISTICS**

$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=-60Vdc$ )	---	---	-100	nAdc
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=-6.0Vdc$ )	---	---	-100	nAdc

**ON CHARACTERISTICS**

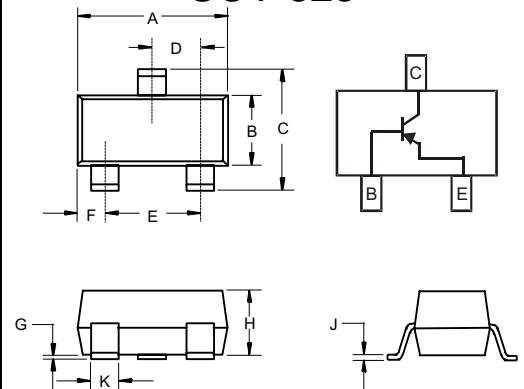
$BV_{CBO}$	Collector-base breakdown voltage ( $I_C=-50\mu Adc$ )	-60	---	---	Vdc
$BV_{CEO}$	Collector-emitter breakdown voltage ( $I_C=-1mAdc$ )	-50	---	---	Vdc
$BV_{EBO}$	Emitter-base breakdown voltage ( $I_E=-50\mu Adc$ )	-6	---	---	Vdc
$h_{FE}$	DC Current Gain ( $I_C=-1mAdc, V_{CE}=-6.0Vdc$ )	120	---	560	---
$V_{CE(sat)}$	Collector Saturation Voltage ( $I_C=-50mAdc, I_B=-5.0mAdc$ )	---	---	-0.5	Vdc
$C_{ob}$	Output Capacitance ( $V_{CB}=-12.0Vdc, I_E=0, f=1.0MHz$ )	---	5.0	---	pF
$f_T$	Gain Bandwidth product ( $V_{CE}=-12Vdc, I_E=2mAdc, f=30MHz$ )	---	100	---	MHz

**$h_{FE}$  CLASSIFICATION**

Rank	Q	R	S
$h_{FE}$	120~270	180~390	270~560
Marking	FQ	FR	FS

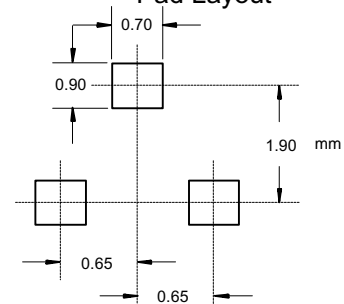
**PNP Silicon Epitaxial Transistors**

**SOT-323**



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.083	.096	2.10	2.45	
D	.026 Nominal		0.65Nominal		
E	.047	.055	1.20	1.40	
F	.012	.016	.30	.40	
G	.000	.004	.000	.100	
H	.035	.039	.90	1.00	
J	.004	.010	.100	.250	
K	.006	.016	.15	.40	

**Suggested Solder Pad Layout**



## 2SA1576A

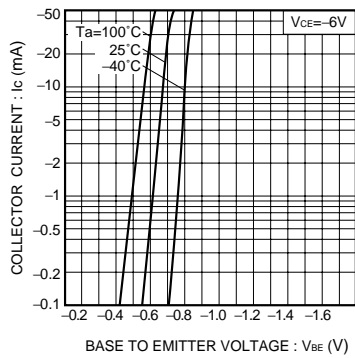


Fig.1 Grounded emitter propagation characteristics

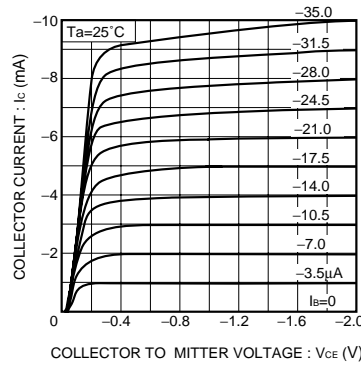


Fig.2 Grounded emitter output characteristics (I)

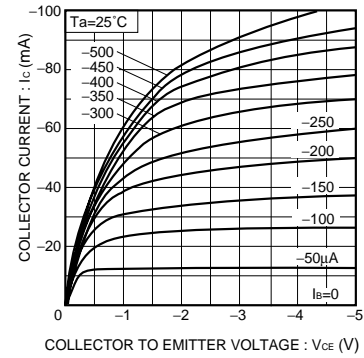


Fig.3 Grounded emitter output characteristics (II)

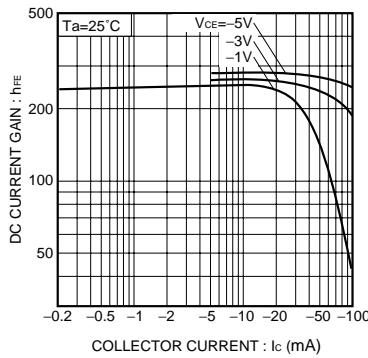


Fig.4 DC current gain vs. collector current (I)

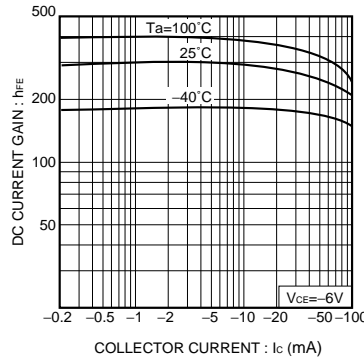


Fig.5 DC current gain vs. collector current (II)

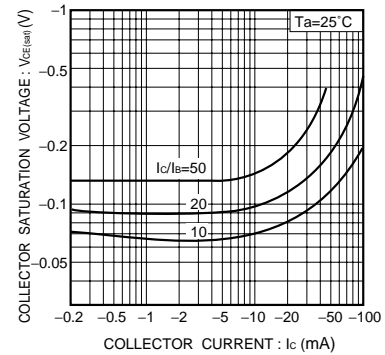


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

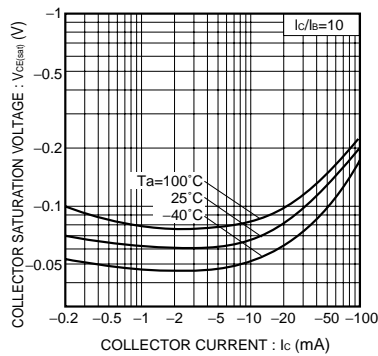


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

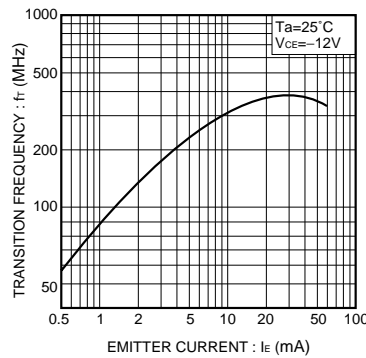


Fig.8 Gain bandwidth product vs. emitter current

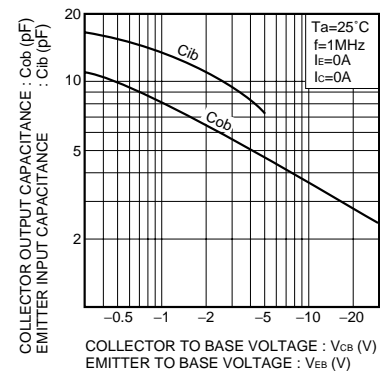


Fig.9 Collector output capacitance vs. collector-base voltage  
Emitter input capacitance vs. emitter-base voltage



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### Ordering Information :

Device	Packing
Part Number-TP	Tape & Reel; 3 Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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