

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

DESCRIPTION

The 2SA1576A is designed for use in driver stage of AF amplifier and general purpose amplificaion.

FEATURES

- Complements of the 2SC4081
- Excellent h_{FE} Linearity

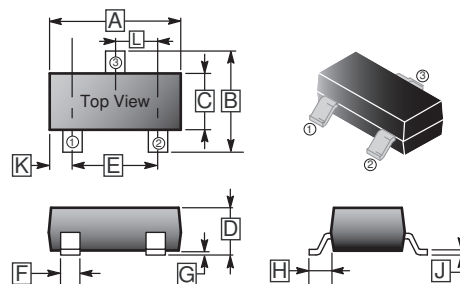
CLASSIFICATION OF h_{FE}

Product-Rank	2SA1576A-Q	2SA1576A-R	2SA1576A-S
Range	120~270	180~390	270~560
Marking	FQ	FR	FS

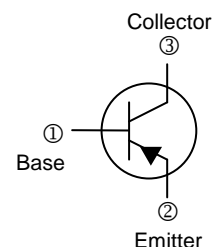
PACKAGE INFORMATION

Package	MPQ	LeaderSize
SOT-323	3K	7' inch

SOT-323



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.80	2.20	G	0.100	REF.
B	1.80	2.45	H	0.525	REF.
C	1.15	1.35	J	0.08	0.25
D	0.80	1.10	K	-	-
E	1.20	1.40	L	0.650	TYP.
F	0.20	0.40			



MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current	I_C	-150	mA
Collector Power Dissipation	P_C	200	mW
Junction & Storage temperature	T_J, T_{STG}	150, -55 ~ 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-60	-	-	V	$I_C = -50\mu\text{A}, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-50	-	-	V	$I_C = -1\text{mA}, I_B = 0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-6	-	-	V	$I_E = -50\mu\text{A}, I_C = 0$
Collector Cut-Off Current	I_{CBO}	-	-	0.1	μA	$V_{CB} = -60\text{V}, I_E = 0$
Emitter Cut-off Current	I_{EBO}	-	-	0.1	μA	$V_{EB} = -6\text{V}, I_C = 0$
DC Current Gain	h_{FE}	120	-	560		$V_{CE} = -6\text{V}, I_C = -1\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	-0.5	V	$I_C = -50\text{mA}, I_B = -5\text{mA}$
Transition Frequency	f_T	-	140	-	MHz	$V_{CE} = -12\text{V}, I_C = -2\text{mA}, f = 30\text{MHz}$
Collector Output Capacitance	C_{ob}	-	4	5	pF	$V_{CB} = -12\text{V}, I_E = 0, f = 1\text{MHz}$

CHARACTERISTIC CURVES

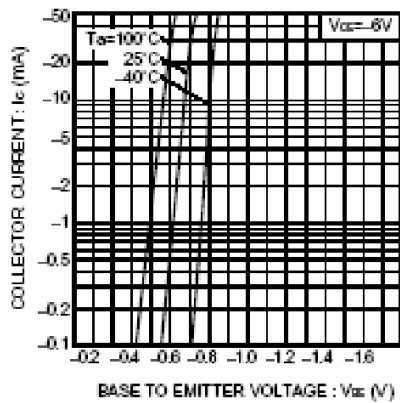


Fig.1 Grounded emitter propagation characteristics

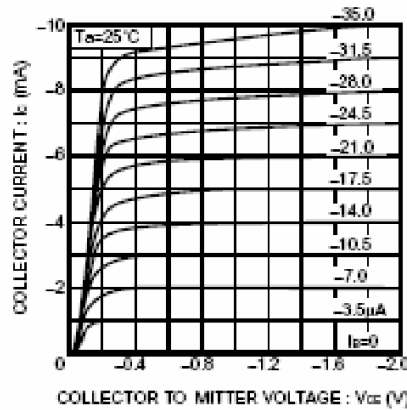


Fig.2 Grounded emitter output characteristics (I)

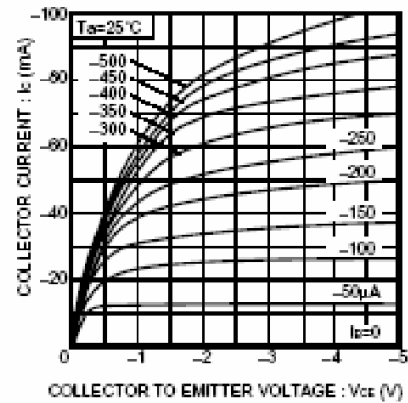


Fig.3 Grounded emitter output characteristics (II)

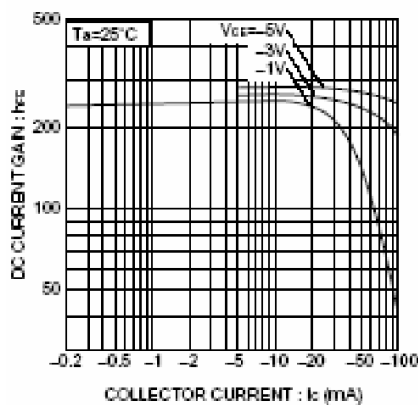


Fig.4 DC current gain vs. collector current (I)

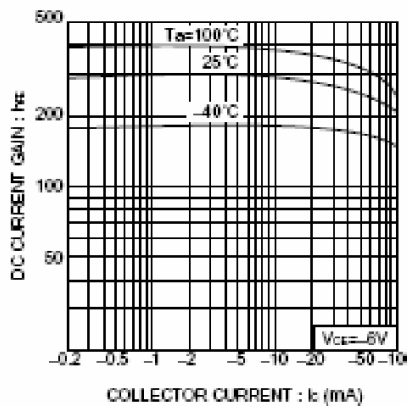


Fig.5 DC current gain vs. collector current (II)

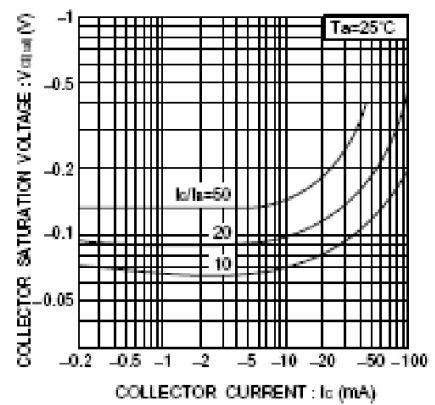


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

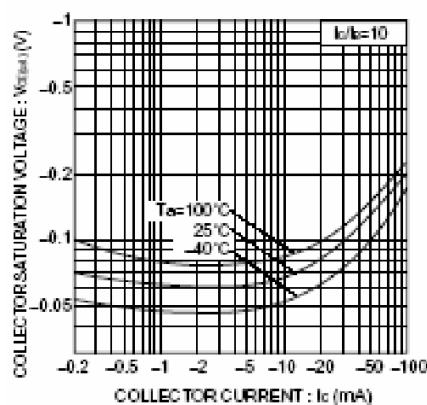


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

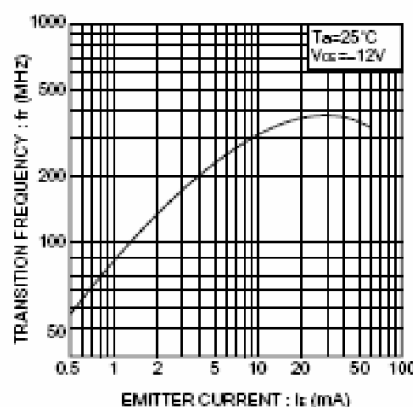


Fig.8 Gain bandwidth product vs. emitter current

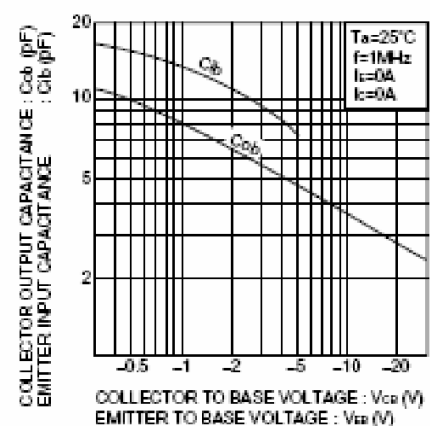


Fig.9 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage