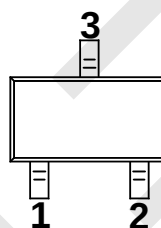


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Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CB0}	60	V
Collector-emitter voltage	V_{CE0}	50	V
Emitter-base voltage	V_{EB0}	7	V
Collector current	I_C	0.15	A
Collector power dissipation	P_C	0.15	W
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55~+150	°C

Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CB0}	60	—	—	V	$I_C=50\mu A$
Collector-emitter breakdown voltage	BV_{CE0}	50	—	—	V	$I_C=1\mu A$
Emitter-base breakdown voltage	BV_{EB0}	7	—	—	V	$I_E=50\mu A$
Collector cutoff current	I_{CB0}	—	—	0.1	μA	$V_{CB}=60V$
Emitter cutoff current	I_{EB0}	—	—	0.1	μA	$V_{EB}=7V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.5	V	$I_C/I_E=50mA/5mA$
DC current transfer ratio	h_{FE}	120	—	560	—	$V_{CE}=6V, I_C=1mA$
Transition frequency	f_T	—	180	—	MHz	$V_{CE}=12V, I_E=2mA, f=30MHz$
Output capacitance	C_{ob}	—	2.0	3.5	pF	$V_{CB}=12V, I_E=0A, f=1MHz$

h_{FE} values are classified as follows:

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

Electrical characteristic curves

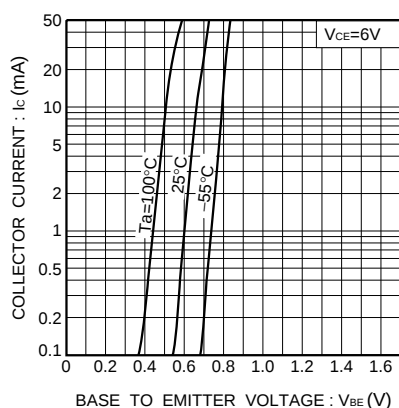


Fig.1 Grounded emitter propagation characteristics

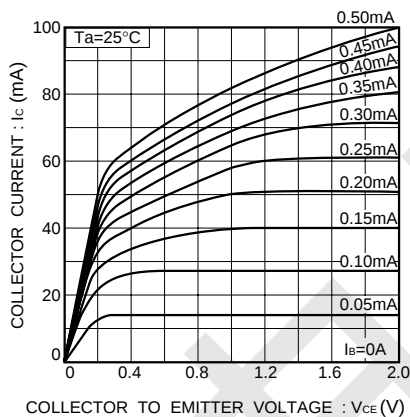


Fig.2 Grounded emitter output characteristics (I)

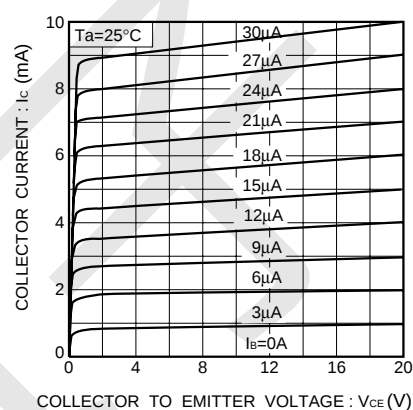


Fig.3 Grounded emitter output characteristics (II)

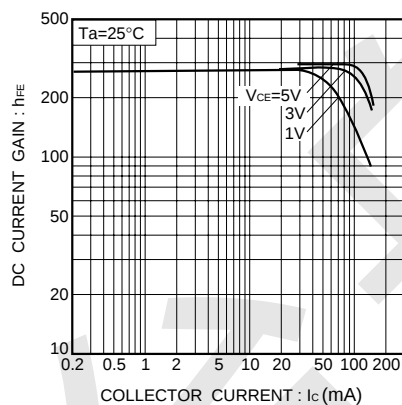


Fig.4 DC current gain vs. collector current (I)

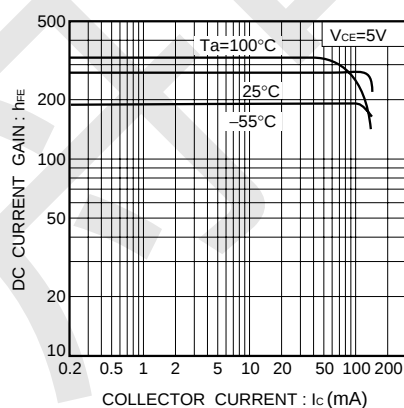


Fig.5 DC current gain vs. collector current (II)

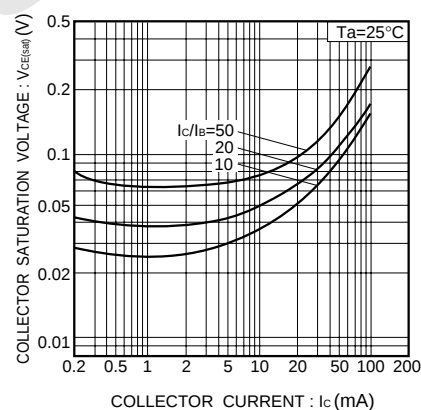


Fig. 6 Collector-emitter saturation voltage vs. collector current

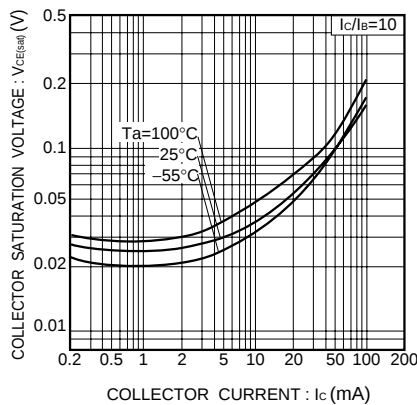


Fig.7 Collector-emitter saturation voltage vs. collector current (I)

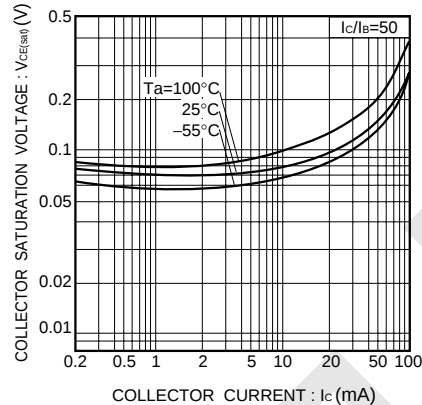


Fig.8 Collector-emitter saturation voltage vs. collector current (II)

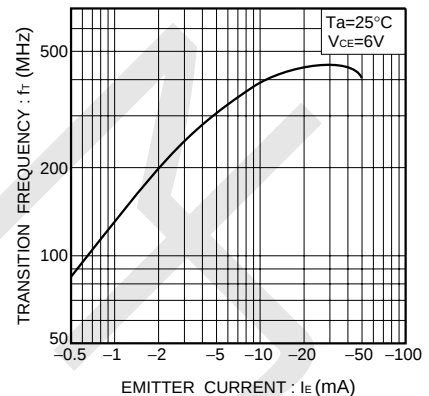


Fig.9 Gain bandwidth product vs. emitter current

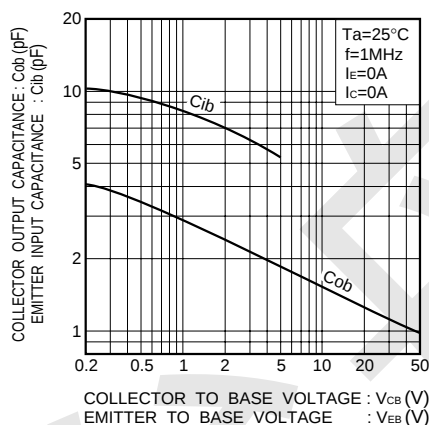


Fig.10 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

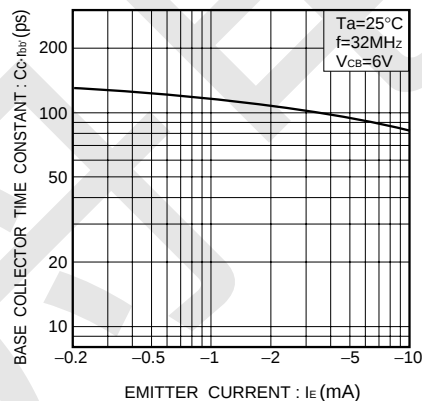
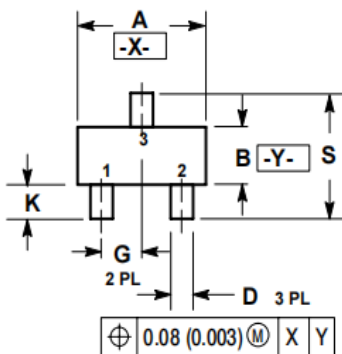


Fig.11 Base-collector time constant vs. emitter current

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NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. 463C-01 OBSOLETE, NEW STANDARD 463C-02.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.50	1.60	1.70	0.059	0.063	0.067
B	0.75	0.85	0.95	0.030	0.034	0.040
C	0.60	0.70	0.80	0.024	0.028	0.031
D	0.23	0.28	0.33	0.009	0.011	0.013
G	0.50 BSC			0.020 BSC		
H	0.53 REF			0.021 REF		
J	0.10	0.15	0.20	0.004	0.006	0.008
K	0.30	0.40	0.50	0.012	0.016	0.020
L	1.10 REF			0.043 REF		
M	---	---	10 °	---	---	10 °
N	---	---	10 °	---	---	10 °
S	1.50	1.60	1.70	0.059	0.063	0.067

