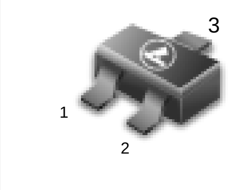
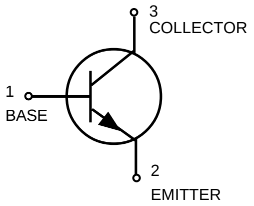
General Purpose Transistors
NPN Silicon

L2SC4081*T1



SC-70/SOT– 323



FEATURE

- ●Low Cob,Cob=2pF(Typ.).
- ●Epitaxial planar type.
- ●PNP complement:L2SA1576A
- ●Pb-Free Package is available.

DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
L2SC4081QT1	BQ	3000/Tape&Reel
L2SC4081QT1G	BQ (Pb-Free)	3000/Tape&Reel
L2SC4081RT1	BR	3000/Tape&Reel
L2SC4081RT1G	BR (Pb-Free)	3000/Tape&Reel
L2SC4081ST1	BS	3000/Tape&Reel
L2SC4081ST1G	BS (Pb-Free)	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}	7.0	V
Collector Current — Continuous	I_C	150	mAdc
Collector power dissipation	P_C	0.2	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

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ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

Characteristic	Symbol	Min	Typ	Max	Unit
Collector–Emitter Breakdown Voltage (I_C = 1 mA)	$V_{(BR)CEO}$	50	—	—	V
Emitter–Base Breakdown Voltage (I_E = 50 µA)	$V_{(BR)EBO}$	7	—	—	V
Collector–Base Breakdown Voltage (I_C = 50 µA)	$V_{(BR)CBO}$	60	—	—	V
Collector Cutoff Current (V_{CB} = 60 V)	I_{CBO}	—	—	0.1	µA
Emitter cutoff current (V_{EB} = 7 V)	I_{EBO}	—	—	0.1	µA
Collector-emitter saturation voltage (I_C/ I_B = 50 mA / 5m A)	$V_{CE(sat)}$	—	—	0.4	V
DC current transfer ratio (V_{CE} = 6 V, I_C= 1mA)	h_{FE}	120	—	560	—
Transition frequency (V_{CE} = 12 V, I_E= – 2mA, f =30MHz)	f_T	—	180	—	MHz
Output capacitance (V_{CB} = 12 V, I_E= 0A, f =1MHz)	C_{ob}	—	2.0	3.5	pF

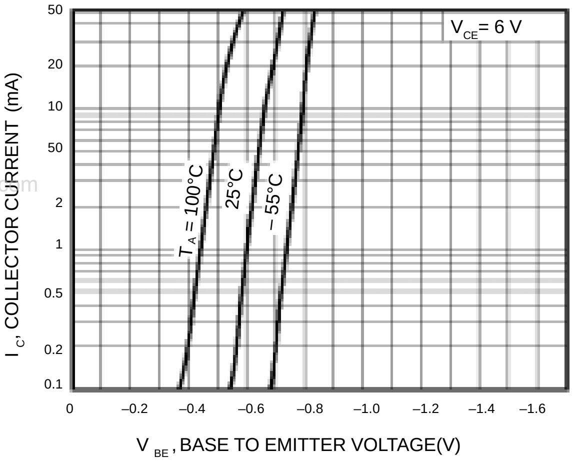

Fig.1 Grounded emitter propagation characteristics

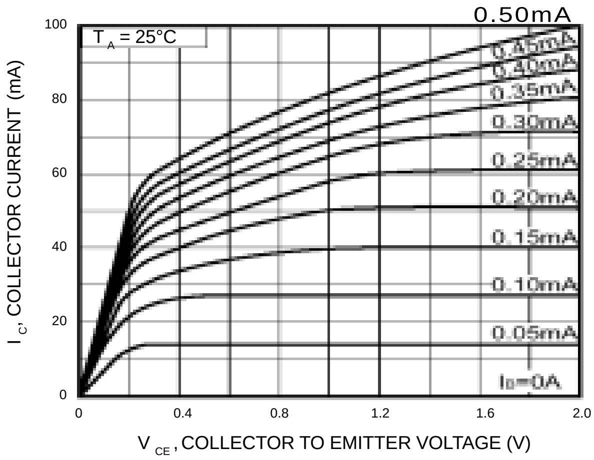

Fig.2 Grounded emitter output characteristics(Ⅰ)

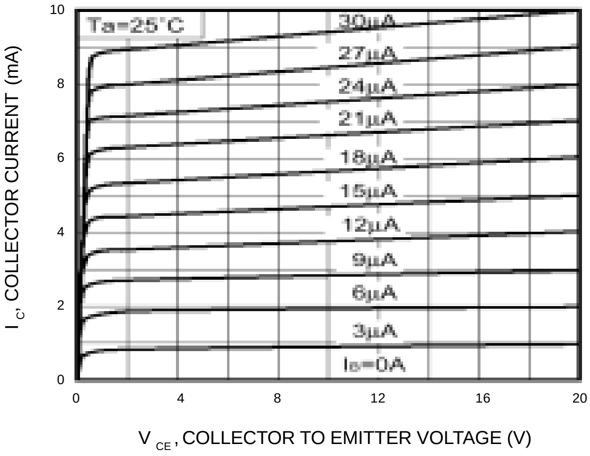

Fig.3 Grounded emitter output characteristics(Ⅱ)

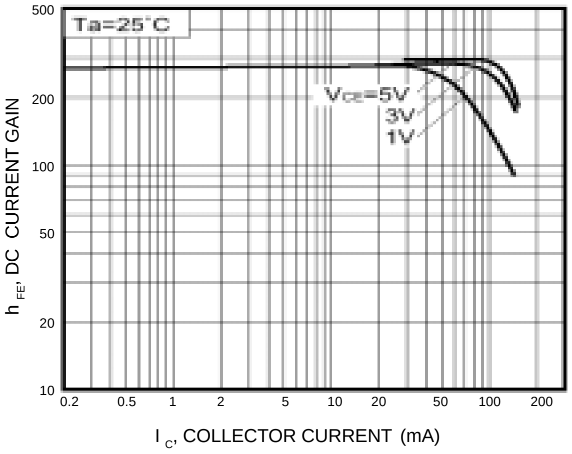

Fig.4 DC current gain vs. collector current (Ⅰ)

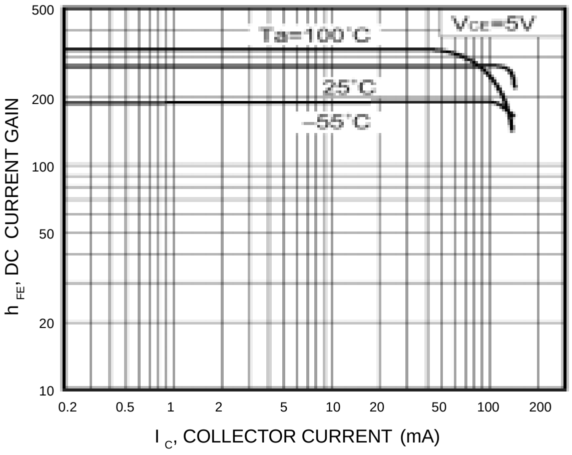

Fig.5 DC current gain vs. collector current (Ⅱ)

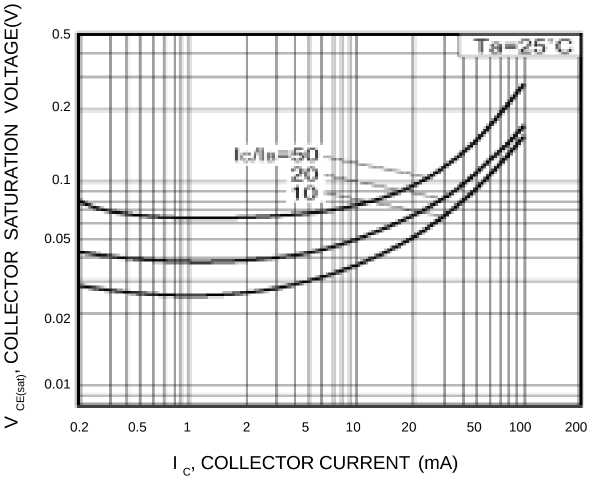

Fig.6 Collector-emitter saturation voltage vs. collector current

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

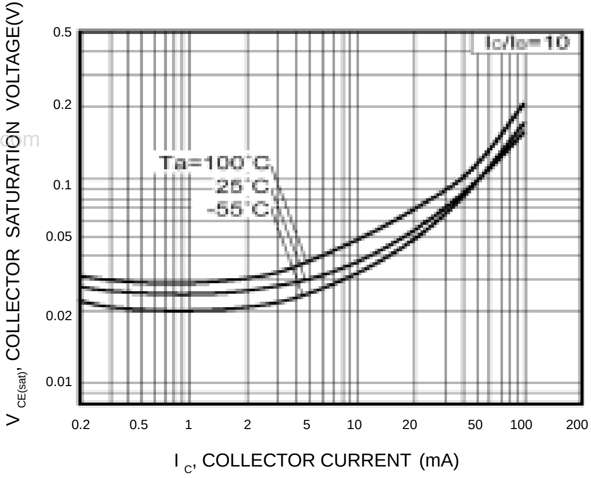


Fig.8 Collector-emitter saturation voltage vs. collector current (Ⅱ)

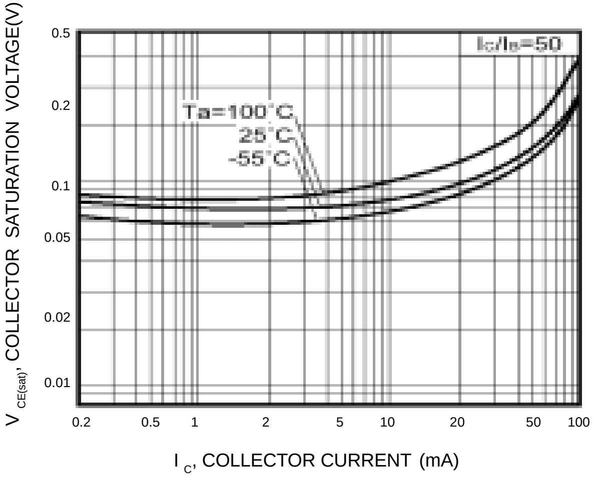


Fig.9 Gain bandwidth product vs. emitter current

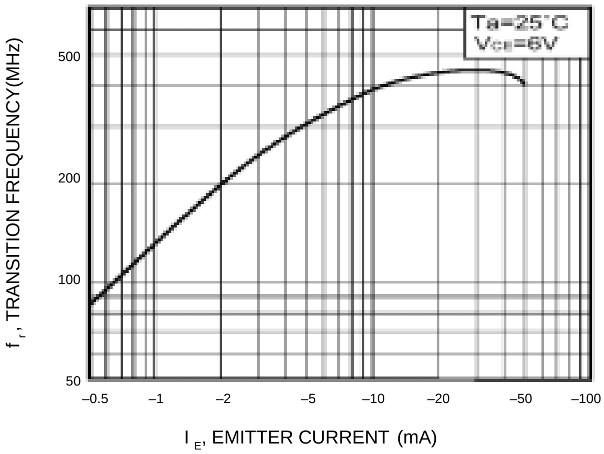


Fig.10 Collector output capacitance vs.collector-base voltage Emitter inputcapacitance vs. emitter-base voltage

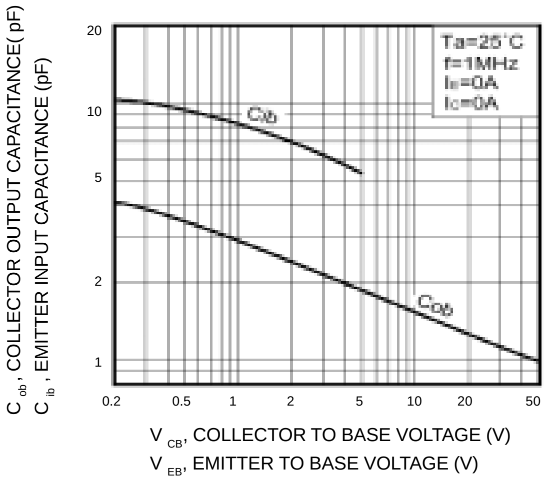
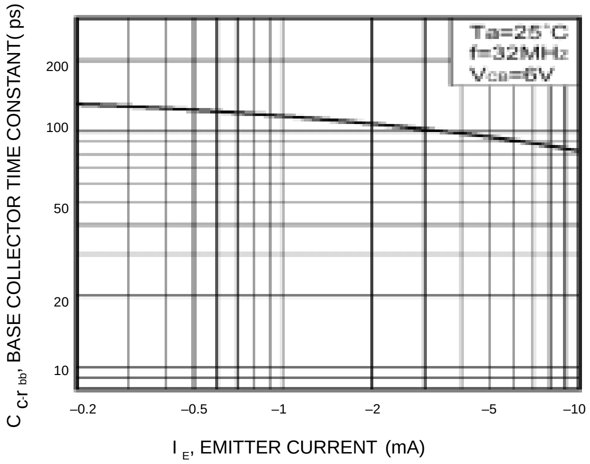


Fig.11 Base-collector time constant vs.emitter current



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

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.032	0.040	0.80	1.00
D	0.012	0.016	0.30	0.40
G	0.047	0.055	1.20	1.40
H	0.000	0.004	0.00	0.10
J	0.004	0.010	0.10	0.25
K	0.017 REF		0.425 REF	
L	0.026 BSC		0.650 BSC	
N	0.028 REF		0.700 REF	
S	0.079	0.095	2.00	2.40