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2SC4081
2SC4081-A
2SC4081-B
2SC4081-C

NPN Silicon Epitaxial Transistors

Features

- Low Cob . Cob=2.0pF(Typ.)
- Complementary to 2SC1576A
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0

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	7	V
I_C	Collector Current	150	mA
P_C	Collector power dissipation	200	mW
T_J	Junction Temperature	150	℃
T_{STG}	Storage Temperature	-55 to +150	℃

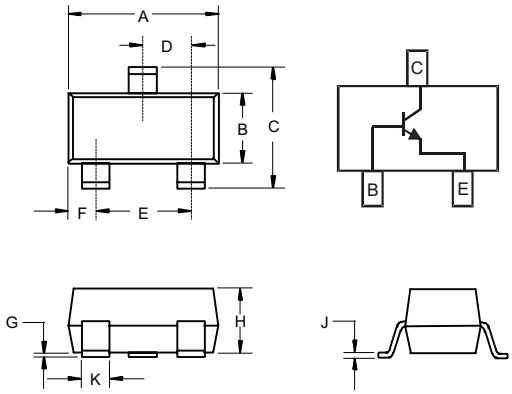
Electrical Characteristics @ 25℃ Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
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=-50μAdc)	60	---	---	Vdc
BV_{CEO}	Collector-emitter breakdown voltage (I_C=-1μAdc)	50	---	---	Vdc
BV_{EBO}	Emitter-base breakdown voltage (I_E=-50μAdc)	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)	---	---	0.4	Vdc
C_{ob}	Output Capacitance (V_{CB}=-12.0Vdc, I_E=0, f=1.0MHz)	---	2.0	3.5	pF
f_T	Gain Bandwidth product (V_{CE}=-12Vdc, I_E=2mAdc,f=30MHz)	---	180	---	MHz

h_{FE} CLASSIFICATION

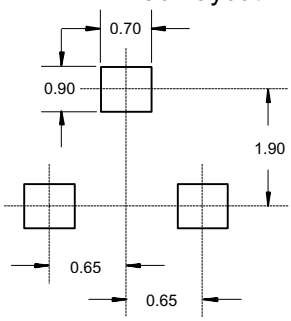
Rank	A	B	C
Marking	BQ	BR	BS
h_{FE}	120~270	180~390	270~560

SOT-323



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.079	.087	2.00	2.20	
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	.012	.016	.30	.40	

Suggested Solder Pad Layout



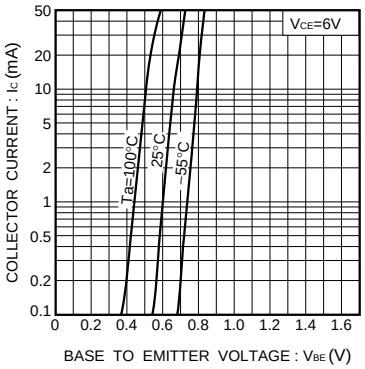


Fig.1 Grounded emitter propagation characteristics

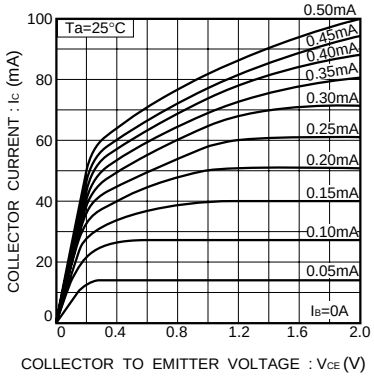


Fig.2 Grounded emitter output characteristics (I)

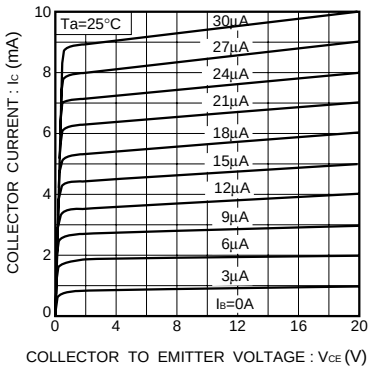


Fig.3 Grounded emitter output characteristics (II)

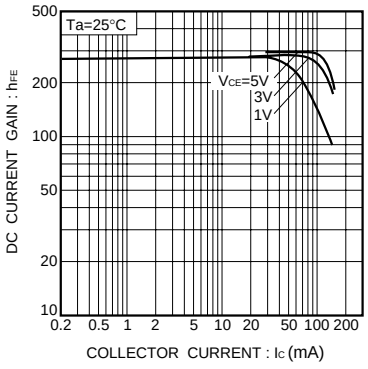


Fig.4 DC current gain vs. collector current (I)

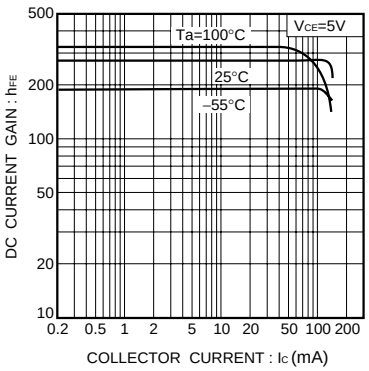


Fig.5 DC current gain vs. collector current (II)

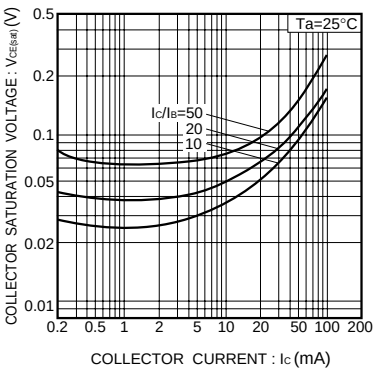


Fig. 6 Collector-emitter saturation voltage vs. collector current

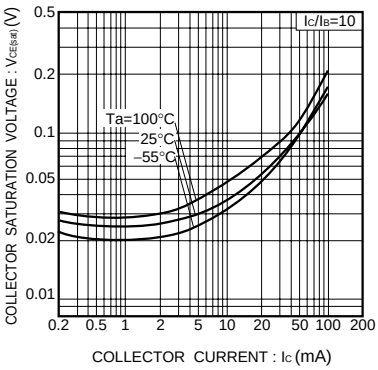


Fig.7 Collector-emitter saturation voltage vs. collector current (I)

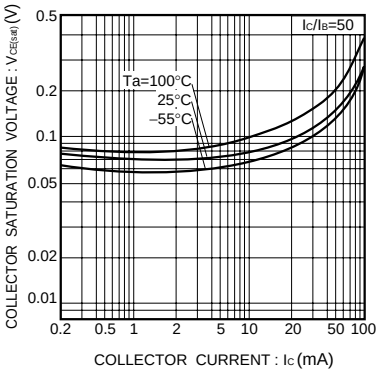


Fig.8 Collector-emitter saturation voltage vs. collector current (II)

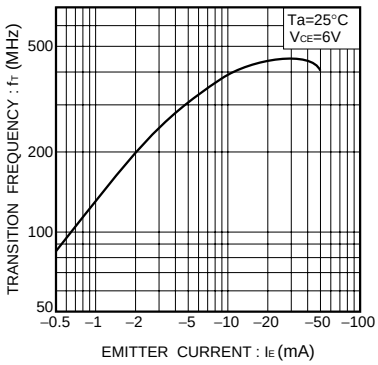


Fig.9 Gain bandwidth product vs. emitter current

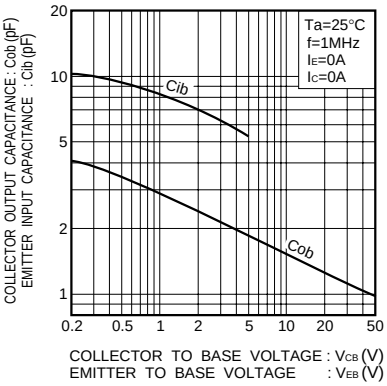


Fig.10 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

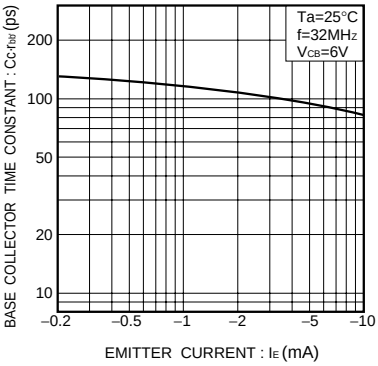


Fig.11 Base-collector time constant vs. emitter current

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