



Micro Commercial Components



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**2SC4097-P
2SC4097-Q
2SC4097-R**

**NPN Silicon
Epitaxial Transistors**

Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- High I_{Cmax} . $I_{Cmax}=0.5A$
- Low $V_{CE(SAT)}$. Optimal for low voltage operation.
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	32	V
V_{CBO}	Collector-Base Voltage	40	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	500	mA
P_C	Collector power dissipation	200	mW
T_J, T_{STG}	Junction and Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
$V_{(BR)CBO}$	Collector -base breakdown voltage ($I_C=100\mu A, I_E=0$)	40			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage ($I_C=1mA, I_B=0$)	32			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage ($I_E=100\mu A, I_C=0$)	5			V
I_{CBO}	Collector cut-off current ($V_{CB}=20V, I_E=0$)			1	μA
I_{EBO}	Emitter cut-off current ($V_{EB}=4V, I_C=0$)			1	μA
h_{FE}	DC Current Gain ($V_{CE}=3V, I_C=10mA$)	82		390	
$V_{CE(sat)}$	Collector-emitter saturation voltage ($I_C=100mA, I_B=10mA$)			0.4	V
C_{ob}	Collector Output Capacitance ($V_{CB}=10V, I_E=0, f=1.0MHz$)		6		pF
f_T	Transition frequency ($V_{CE}=5V, I_C=20mA, f=100MHz$)		250		MHz

hFE CLASSIFICATION

Rank	P	Q	R
Range	82~180	120~270	180~390
Marking	CP	CQ	CR

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

2SC4097-P/Q/R

● **Electrical characteristic curves**

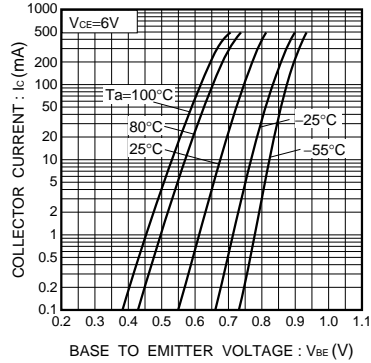


Fig.1 Grounded emitter propagation characteristics

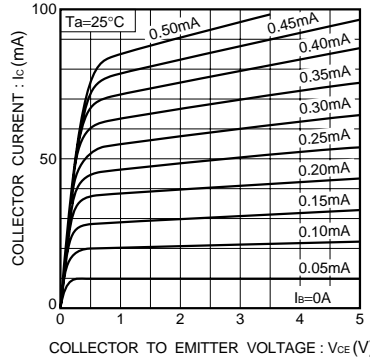


Fig.2 Grounded emitter output characteristics (I)

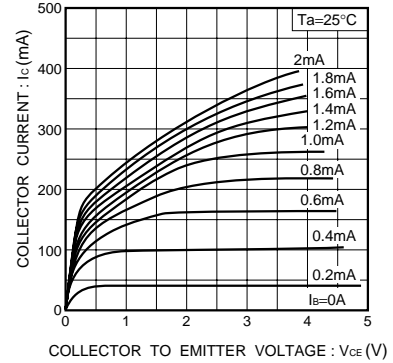


Fig.3 Grounded emitter output characteristics(II)

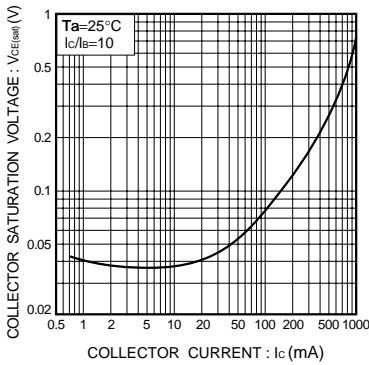


Fig.4 Collector-emitter saturation voltage vs. collector current

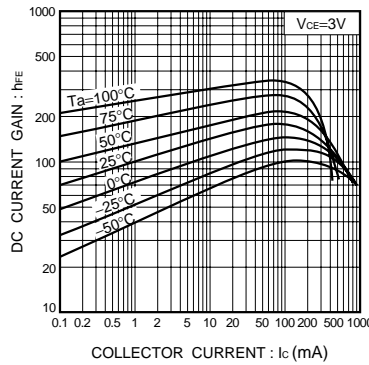


Fig.5 DC current gain vs. collector current

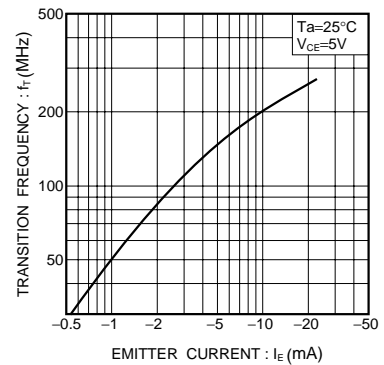


Fig. 6 Gain bandwidth product vs. emitter current

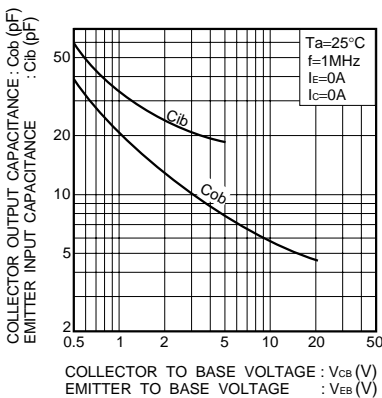


Fig.7 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage



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Ordering Information :

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

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

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