

Medium Power Transistor

L2SC4097RT1

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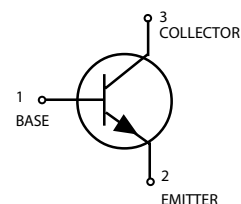
SC-70 (SOT-323)

●Features

- 1) High $I_{CMax.}$
 $I_{CMax.} = 0.5mA$
- 2) Low $V_{CE(sat)}$.
Optimal for low voltage operation.
- 3) Pb-Free Package is available.

MAXIMUM RATINGS ($T_A = 25^\circ C$)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	40	V
Collector-emitter voltage	V_{CEO}	32	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	0.5	A*
Collector power dissipation	P_C	0.2	W
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55~+150	$^\circ C$



* P_C must not be exceeded.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ C$)

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	40	-	-	V	$I_C = 100\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	32	-	-	V	$I_C = 1mA$
Emitter-base breakdown voltage	BV_{EBO}	5	-	-	V	$I_E = 100\mu A$
Collector cutoff current	I_{CBO}	-	-	1	μA	$V_{CB} = 20V$
Emitter cutoff current	I_{EBO}	-	-	1	μA	$V_{EB} = 4V$
DC current transfer ratio	h_{FE}	180	-	390	-	$V_{CE} = 3V, I_C = 100mA$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.4	V	$I_C/I_B = 500mA/50mA$
Transition frequency	f_T	-	250	-	MHz	$V_{CE} = 5V, I_E = -20mA, f = 100MHz$
Output capacitance	C_{ob}	-	6.0	-	pF	$V_{CB} = 10V, I_E = 0A, f = 1MHz$

MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
L2SC4097RT1	CR	3000/Tape&Reel
L2SC4097RT1G	CR (Pb-Free)	3000/Tape&Reel

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Electrical characteristic curves ($T_A = 25^\circ\text{C}$)

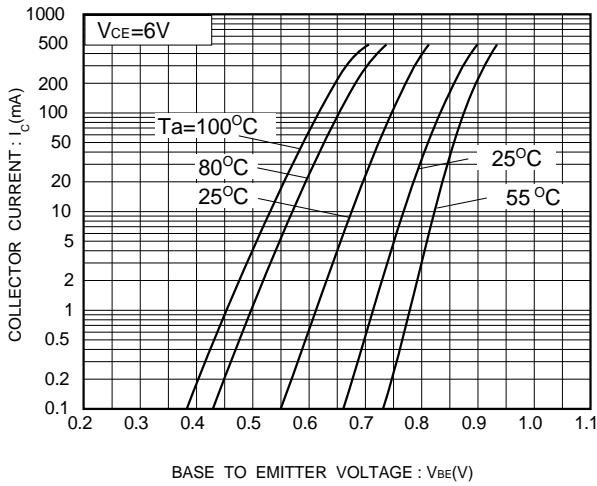


Fig.1 Grounded emitter propagation characteristics

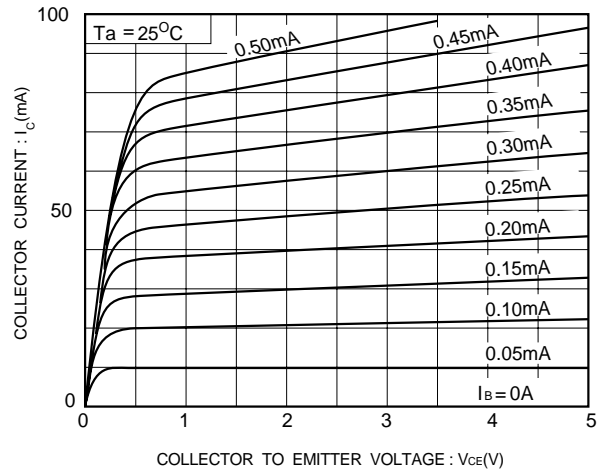


Fig.2 Grounded emitter output characteristics(I)

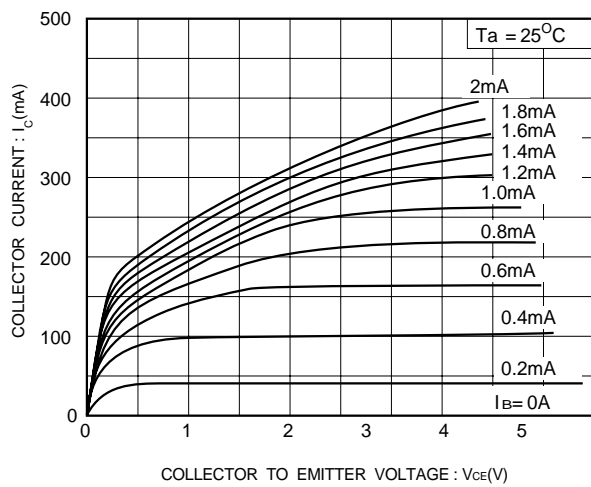


Fig.3 Grounded emitter output characteristics(II)

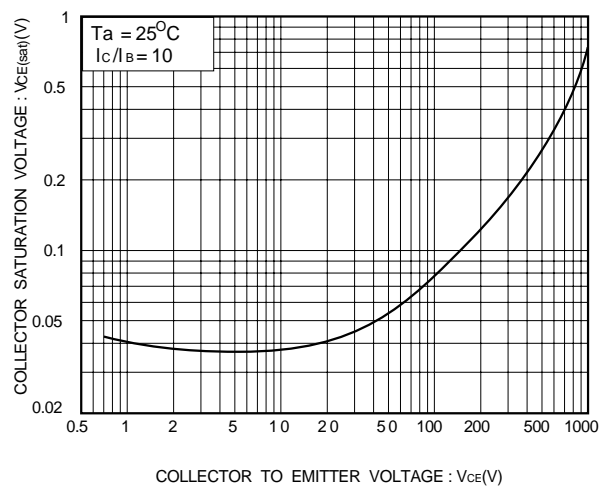


Fig.4 Collector-emitter saturation voltage vs. collector current

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Electrical characteristic curves ($T_A = 25^\circ\text{C}$)

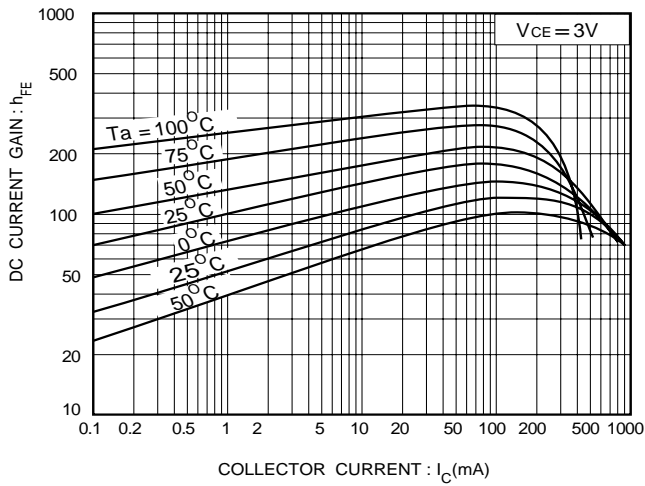


Fig.5 DC current gain vs. collector current

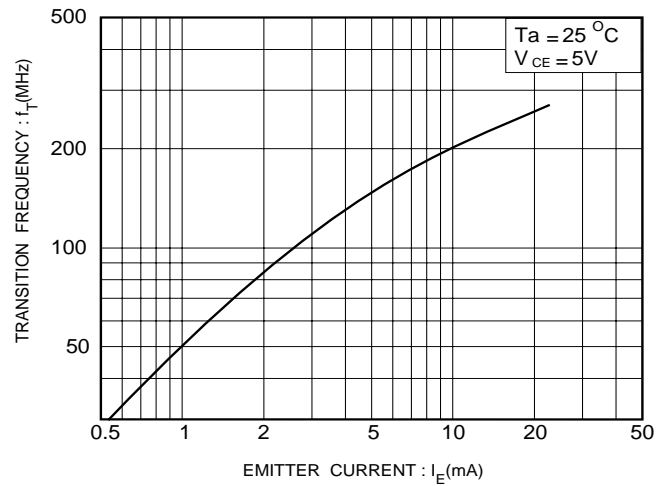


Fig.6 Gain bandwidth product vs. emitter current

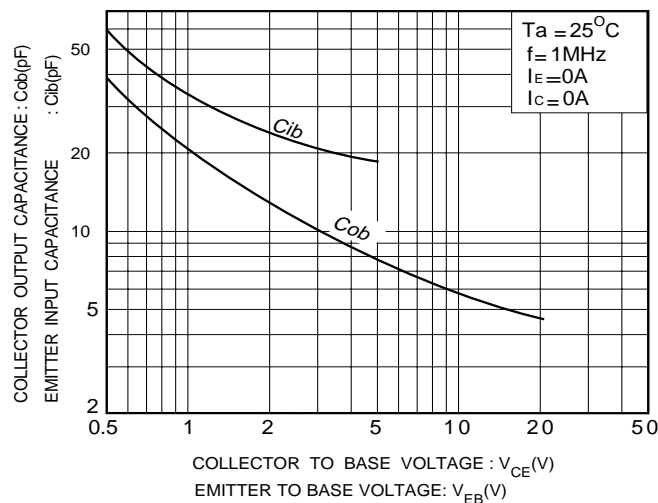


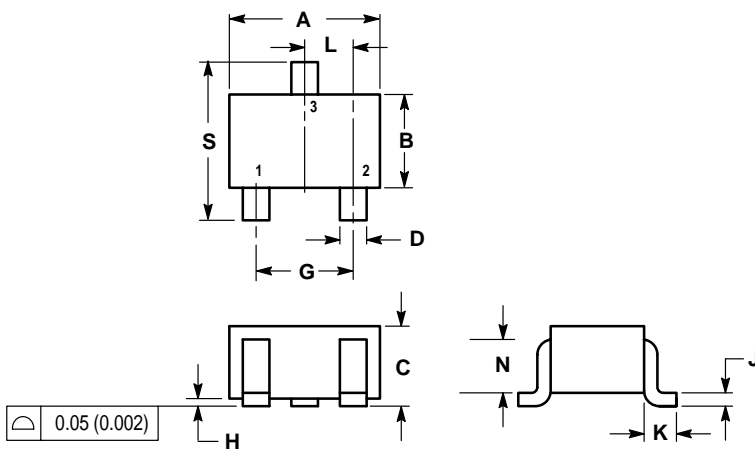
Fig.7 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

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SC-70 / SOT-323

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

- PIN 1. BASE
 2. EMITTER
 3. COLLECTOR

