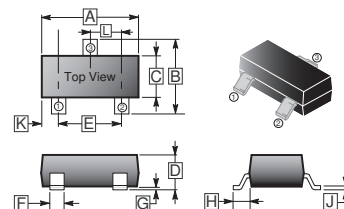


RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- High I_{CMax} . $I_{CMax}=0.5A$.
- Low $V_{CE(sat)}$. Optimal for low voltage operation.
- Complementary to 2SA1577

SOT-323



MECHANICAL DATA

- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Mounting Position: Any

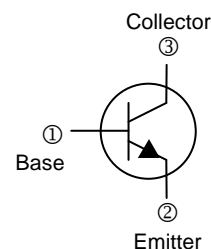
CLASSIFICATION OF h_{FE}

Product-Rank	2SC4097-P	2SC4097-Q	2SC4097-Q
Range	82~180	120~270	180~390
Marking	CP	CQ	CR

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.80	2.20	G	0.100 REF.	
B	1.80	2.45	H	0.525 REF.	
C	1.15	1.35	J	0.08	0.25
D	0.80	1.10	K	-	-
E	1.20	1.40	L	0.650 TYP.	
F	0.20	0.40			

PACKAGE INFORMATION

Package	MPQ	LeaderSize
SOT-323	3K	7' inch



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	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	500	mA
Collector Power Dissipation	P_C	200	mW
Junction & Storage temperature	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	40	-	-	V	$I_C=100\mu\text{A}, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	32	-	-	V	$I_C=1\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5	-	-	V	$I_E=100\mu\text{A}, I_C=0$
Collector Cut-Off Current	I_{CBO}	-	-	1	μA	$V_{CB}=20\text{V}, I_E=0$
Emitter Cut-off Current	I_{EBO}	-	-	1	μA	$V_{EB}=4\text{V}, I_C=0$
DC Current Gain	h_{FE}	82	-	390		$V_{CE}=3\text{V}, I_C=10\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.4	V	$I_C=500\text{mA}, I_B=50\text{mA}$
Transition Frequency	f_T	-	250	-	MHz	$V_{CE}=5\text{V}, I_C=20\text{mA}, f=100\text{MHz}$
Collector Output Capacitance	C_{ob}	-	6	-	pF	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$

CHARACTERISTIC CURVES

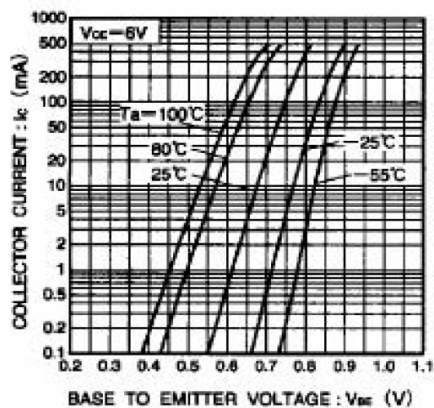


Fig.1 Grounded emitter propagation characteristics

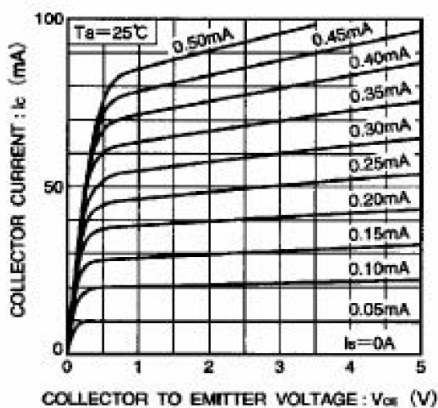


Fig.2 Grounded emitter output characteristics (I)

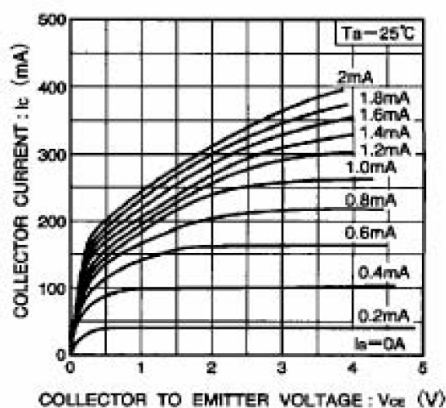


Fig.3 Grounded emitter output characteristics (II)

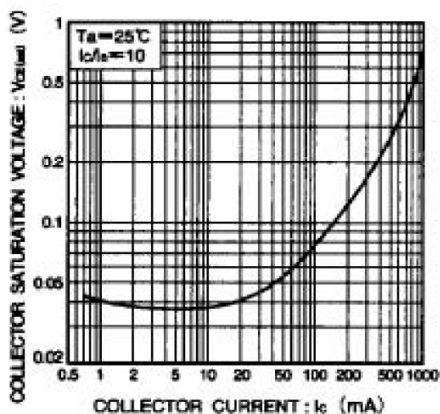


Fig.4 Collector-emitter saturation voltage vs. collector current

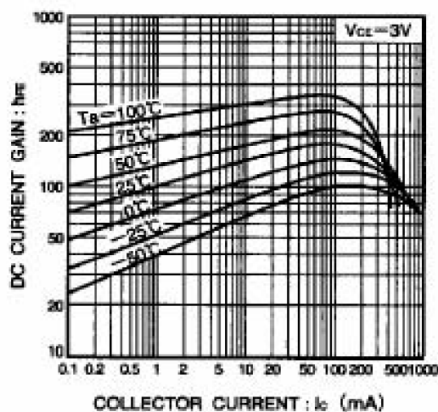


Fig.5 DC current gain vs. collector current

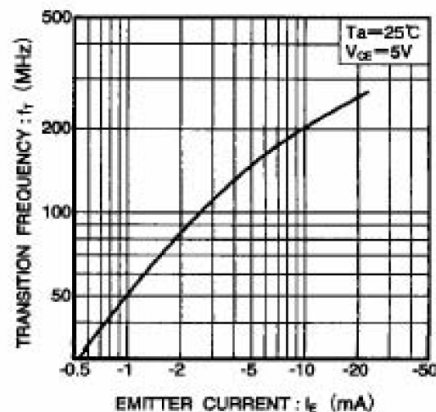


Fig.6 Gain bandwidth product vs. emitter current

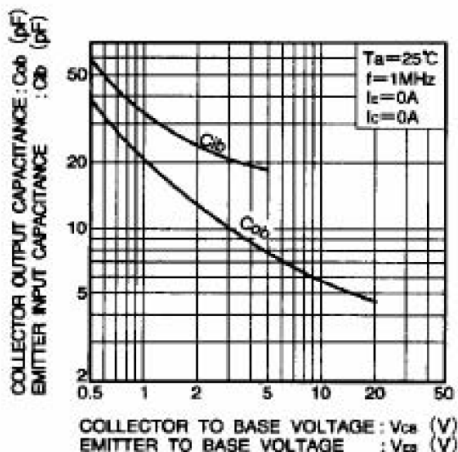


Fig.7 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage