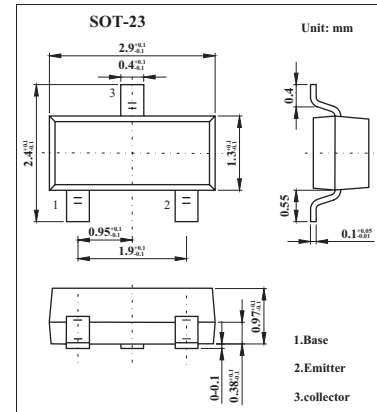


Medium Power Transistor

2SC4097

■ Features

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



■ Absolute Maximum Ratings $T_a = 25^\circ C$

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	0.5	A
Collector power dissipation	P_C	0.2	W
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base voltage	V_{CBO}	$I_C = 100\mu A$	40			V
Collector-emitter voltage	V_{CEO}	$I_C = 1mA$	32			V
Emitter-base voltage	V_{EBO}	$I_E = 100\mu A$	5			V
Collector cutoff current	I_{CBO}	$V_{CB} = 20V$			1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4V$			1	μA
DC Current Gain	h_{FE}	$V_{CE} = 3V, I_C = 10mA$	120		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C/I_B = 500mA/50mA$			0.6	V
Output capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0A, f = 1MHz$		6.5		pF
Transition frequency	f_T	$V_{CE} = 5V, I_E = -20mA, f = 100MHz$		250		MHz

■ h_{FE} Classification

Marking	CQ	CR
h_{FE}	120~270	180~390

2SC4097

Typical Characteristics

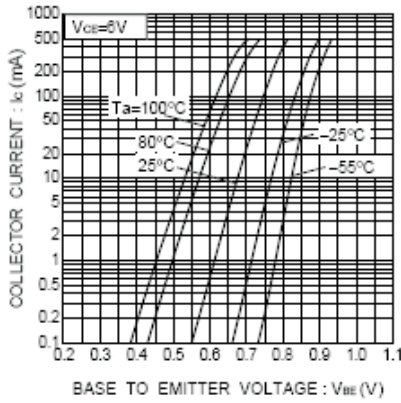


Fig.1 Grounded Emitter Propagation Characteristics

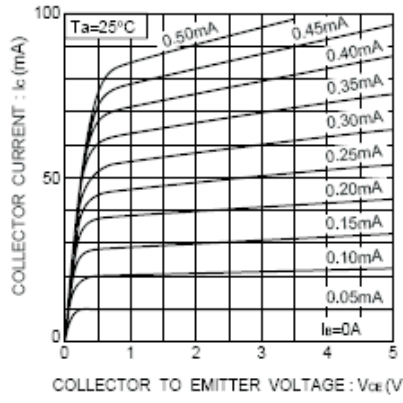


Fig.2 Grounded Emitter Output Characteristics

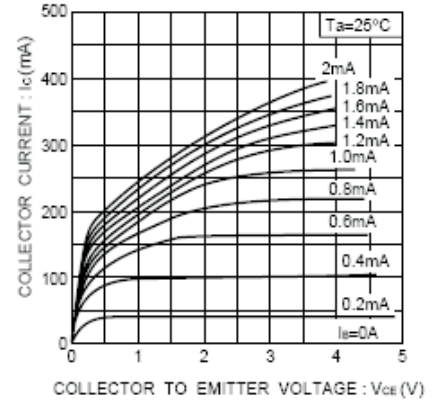


Fig.3 Grounded Emitter Output Characteristics

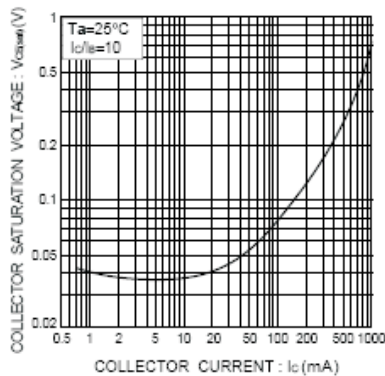


Fig.4 Collector-Emitter Saturation Voltage vs. Collector Current

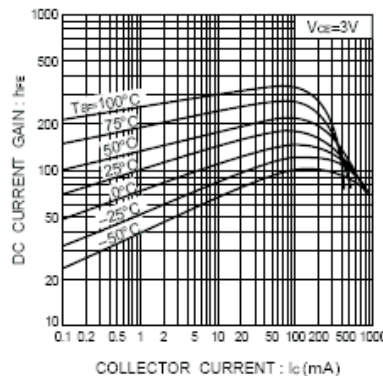


Fig.5 DC Current Gain vs. Collector Current

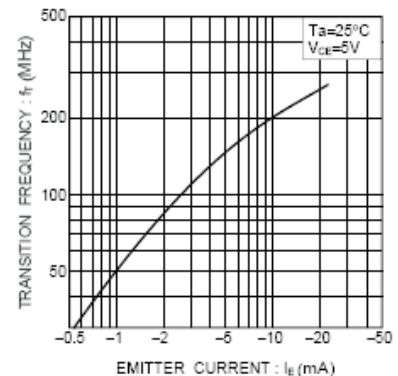


Fig.6 Gain Bandwidth Product vs. Emitter Current

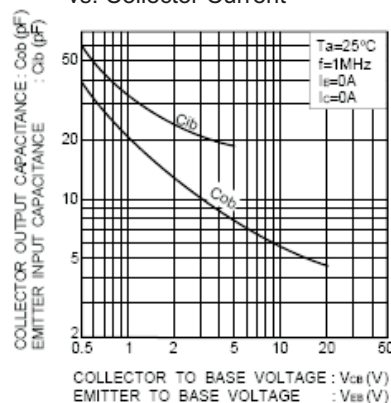


Fig.7 Collector Output Capacitance vs. Collector-Base Voltage
Emitter Input Capacitance vs. Emitter-Base Voltage