Medium Power Transistor (32V, 0.5A) **2SC4097**

● Features

1) High IcMax.

 $I_{CMax.} = 0.5A$

2) Low VcE(sat).

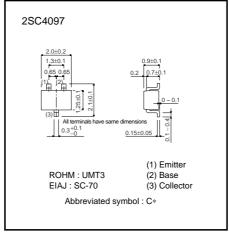
Optimal for low voltage operation.

3) Complements the 2SA1577.

Structure

Epitaxial planar type NPN silicon transistor

●External dimensions (Units : mm)



* Denotes hre

● Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	Vсво	40	V
Collector-emitter voltage	Vceo	32	V
Emitter-base voltage	VEBO	5	V
Collector current	Ic	0.5	Α *
Collector power dissipation	Pc	0.2	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

^{*} Pc must not be exceeded.

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Collector-base breakdown voltage	ВУсво	40	_	_	V	Ic=100μA
Collector-emitter breakdown voltage	BVceo	32	_	_	V	Ic=1mA
Emitter-base breakdown voltage	ВУЕВО	5	_	_	V	Iε = 100μA
Collector cutoff current	Ісво	_	_	1	μА	Vcb = 20V
Emitter cutoff current	ІЕВО	_	_	1	μΑ	V _{EB} = 4V
DC current transfer ratio	hfe	120	_	390	_	VcE = 3V, Ic = 10mA
Collector-emitter saturation voltage	VCE(sat)	_	_	0.6	V	Ic/I _B = 500mA/50mA
Transition frequency	fτ	_	250	_	MHz	VcE = 5V, IE = -20mA, f = 100MHz
Output capacitance	Cob	-	6.5	_	pF	Vcb = 10V, IE = 0A, f = 1MHz

● Packaging Specifications and hFE

		Package	Taping
		Code	T106
Туре	hfe	Basic ordering unit (pieces)	3000
2SC4097	QR		0

hre values are classified as follows:

•	Item	Q	R
	hfe	120 to 270	180 to 390

•Electrical characteristic curves

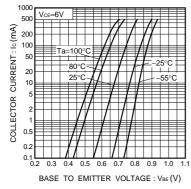


Fig.1 Grounded emitter propagation characteristics

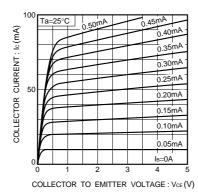
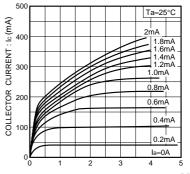
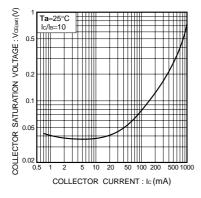


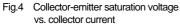
Fig.2 Grounded emitter output characteristics (I)



COLLECTOR TO EMITTER VOLTAGE: VCE (V)

Fig.3 Grounded emitter output characteristics (II)





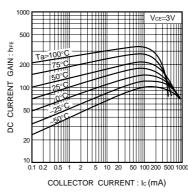


Fig.5 DC current gain vs. collector current

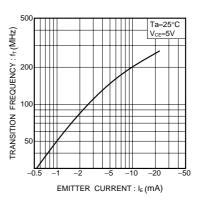


Fig. 6 Gain bandwidth product vs. emitter current

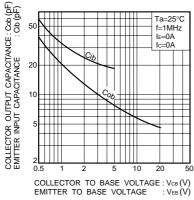


Fig.7 Collector output capacitance vs. collector-base voltage Emitter input capacitance vs. emitter-base voltage

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