

Medium Power Transistor (32V, 0.5A)

2SC2411K / 2SC4097 / 2SC1741S

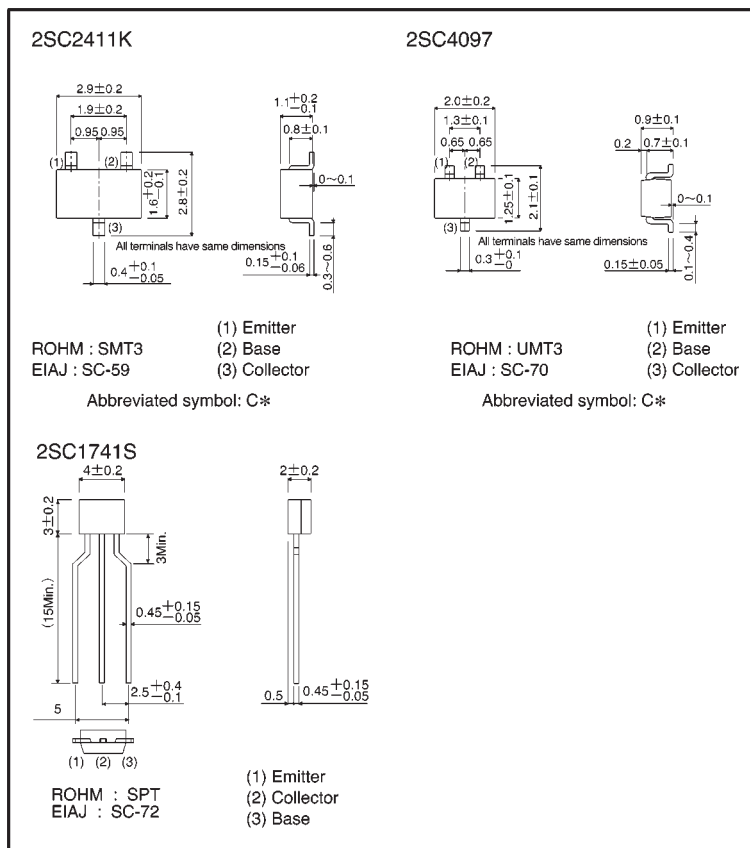
● Features

- 1) High $I_{c(Max)}$
 $I_{c(Max)} = 0.5A$
- 2) Low $V_{CE(sat)}$, Ideal for low voltage operation.
- 3) Complements the
2SA1036K / 2SA1577 / 2SA854S.

● Structure

Epitaxial planar type
NPN silicon transistor

● External dimensions (Units: mm)



* Denotes h_{FE}

● Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	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	°C
Storage temperature	T _{stg}	-55~+150	°C

* P_c must not be exceeded.

● Electrical characteristics (Ta = 25°C)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage		BV _{CB0}	40	—	—	V	I _c =100 μA
Collector-emitter breakdown voltage		BV _{CEO}	32	—	—	V	I _c =1mA
Emitter-base breakdown voltage		BV _{EBO}	5	—	—	V	I _E =100 μA
Collector cutoff current		I _{cBO}	—	—	1	μA	V _{CB} =20V
Emitter cutoff current		I _{EBO}	—	—	1	μA	V _{EB} =4V
DC current transfer ratio	2SC2411K, 2SC4097	h _{FE}	82	—	390	—	V _{CE} =3V, I _c =100mA
	2SC1741S		120	—	560	—	
Collector-emitter saturation voltage		V _{CE(sat)}	—	—	0.4	V	I _c /I _B =100mA/10mA
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

● Packaging specifications and h_{FE}

Type	h _{FE}	Package	Taping		
		Code	T146	T106	TP
		Basic ordering unit (pieces)	3000	3000	5000
2SC2411K	PQR		○	—	—
2SC4097	PQR		—	○	—
2SC1741S	QRS		—	—	○

h_{FE} values are classified as follows :

Item	P	Q	R	S
h _{FE}	82~180	120~270	180~390	270~560

●Electrical characteristic curves

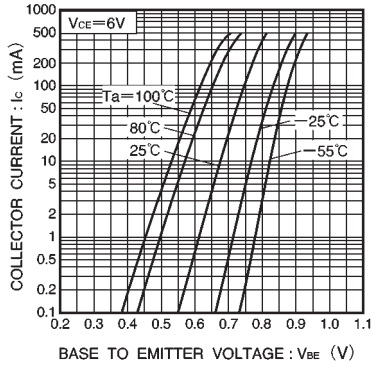


Fig.1 Grounded emitter propagation characteristics

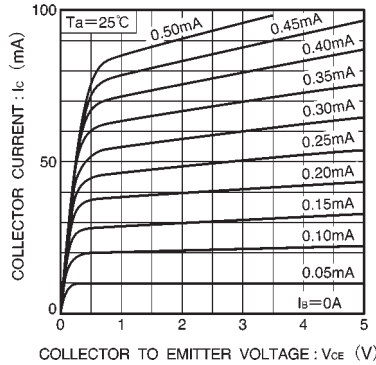


Fig.2 Grounded emitter output characteristics (I)

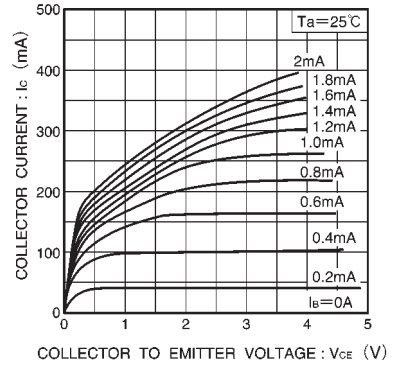


Fig.3 Grounded emitter output characteristics (II)

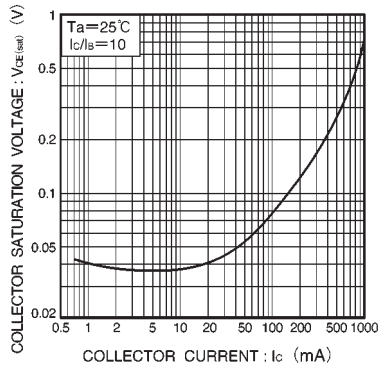


Fig.4 Collector-emitter saturation voltage vs. collector current

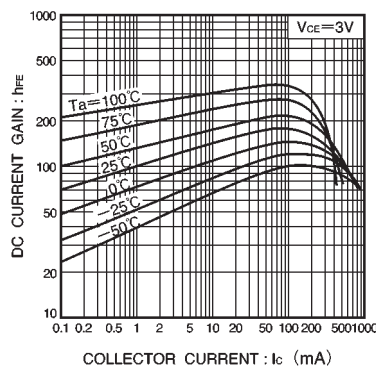


Fig.5 DC current gain vs. collector current

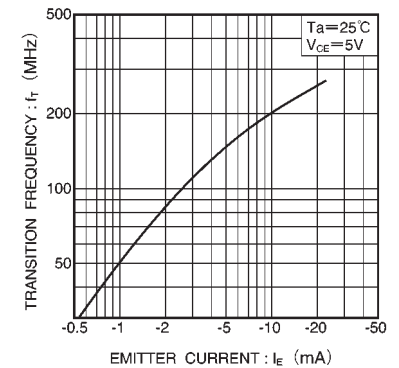


Fig.6 Gain bandwidth product vs. emitter current

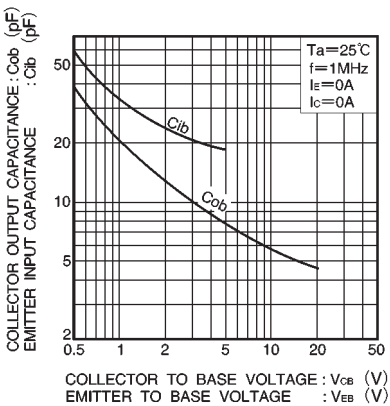


Fig.7 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage