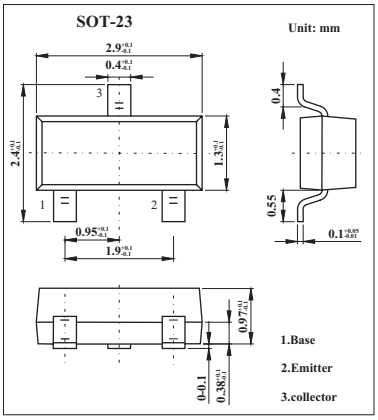
Power Transistor

2SC3837K



■ Features

- High transition frequency. (Typ. fT = 1.5GHz)
- Small rbb'.Cc and high gain. (Typ. 6ps)

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CEO}	18	V
Emitter-base voltage	V_{EBO}	3	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	0.2	W
Junction temperature	Tj	150	℃
Storage temperature	Tstg	-55 to +150	℃

* Single pulse Pw=100ms.

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	I_C=10μA	30			V
Collector-emitter breakdown voltage	V_{CEO}	I_C=1mA	18			V
Emitter-base breakdown voltage	V_{EBO}	I_E=10μA	3			V
Collector cutoff current	I_{CBO}	V_{CB}=20V			0.5	μA
Emitter cutoff current	I_{EBO}	V_{EB}=10V			0.5	μA
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C/I_B=20mA/4mA			0.5	V
DC current gain	h_{FE}	V_{CE}=10V, I_C=10mA	56		180	
Collector-base time constant	rbb'.Cc	V_{CB} = 10V , I_C = 10mA , f = 31.8MHz		6	13	ps
Noise factor	NF	V_{CE}=12V,I_C=2mA,f=200MHz,R_g=50Ω		4.5		dB
Output capacitance *	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		0.9	1.5	pF
Transition frequency	f_T	V_{CE}=10V, I_E= 10mA, f=200MHz	600	1500		MHz

* Measured using pulse current.

■ hFE Classification

Marking	ACN	ACP
Rank	N	P
hFE	56～120	82～180