Low VCE(sat) Transistor (Strobe flash) (20V, 10A)

2SC5001

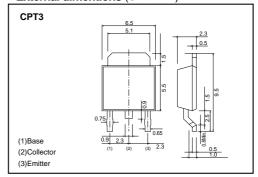
● Features

- 1) Low saturation voltage, typically VcE(sat) = 0.13V at Ic/IB=4A/50mA.
- 2) High current capacity, typically Ic = 10A for DC operation and 15A for 10ms pulse.
- 3) Complements the 2SA1834.

●Packaging specifications and hFE

Туре	2SC5001
Package	CPT3
hfe	QR
Code	TL
Basic ordering unit (pieces)	2500

●External dimentions (Unit : mm)



● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit	
Collector-base voltage	Vсво	30	V	
Collector-emitter voltage	Vceo	20	V	
Emitter-base voltage	VEBO	6	V	
Collector current	Ic	10	A	
	Іср	15	A *	
Base current	Ів	2	A	
Collector power dissipation	Pc	1	W	
		10	W(Tc=25°C)	
Junction temperature	Tj	150	°C	
Storage temperature	Tstg	-55 to +150	°C	

^{*} Single pulse Pw=10ms

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Collector-base breakdown voltage	ВУсво	30	-	-	V	Ic=50μA
Collector-emitter breakdown voltage	BVceo	20	-	-	V	Ic=1mA
Emitter-base breakdown voltage	ВУЕВО	6	-	-	V	I _E =50μA
Collector cutoff current	Ісво	-	-	1	μΑ	Vcb=20V
Emitter cutoff current	ІЕВО	-	-	1	μΑ	V _{EB} =5V
Collector-emitter saturation voltage	VCE(sat)	-	0.13	0.25	V	Ic/I _B =4A/0.05A
Base-emitter saturation voltage	V _{BE} (sat)	-	0.9	1.2	V	Ic/I _B =4A/0.05A
DC current transfer ratio	h _{FE1}	120	-	390	-	Vce/lc=2V/0.5A
DC current transfer ratio	hFE2	82	-	-	-	Vce=2V , Ic=4A
Transition frequency	f⊤	-	150	-	MHz	Vc=5V , I=-1.5A , f=50MHz
Output capacitance	Cob	-	220	-	pF	Vcb=10V , Ie=0A , f=1MHz

COLLECTOR CURRENT: Ic (A)

Fig.1 Ground emitter output characteristics

COLLECTOR TO VOLTAGE: VCE (V)

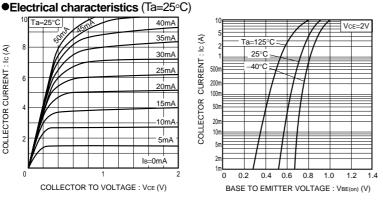


Fig.2 Ground emitter propagation characteristics

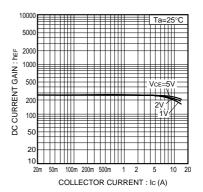


Fig.3 DC current gain vs. collector current

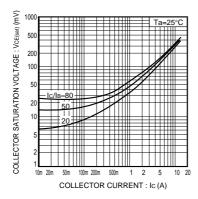


Fig.4 Collector-emitter saturation voltage vs. collector current

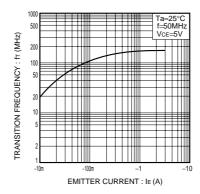


Fig.5 Gain bandwidth product vs. emitter current

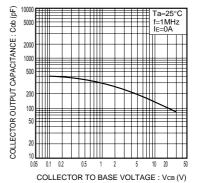


Fig.6 Collector output capacitance vs. collector-base voltage

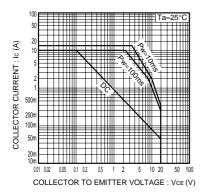


Fig.7 Safe operating area

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