Low V_{CE(sat)} Transistor (Strobe flash) (20V, 10A) 2SC5001

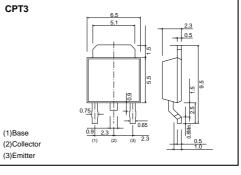
Features

- 1) Low saturation voltage, typically V_{CE(sat)} = 0.13V at Ic / I_B= 4A / 50mA.
- 2) High current capacity, typically $\rm lc$ = 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	lc	10	A	
	Іср	15	A *	
Base current	Ів	2	A	
Collector power dissipation	Pc	1	W	
Collector power dissipation	PC	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)

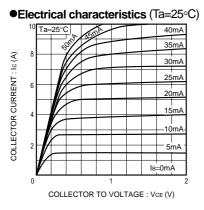
Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Collector-base breakdown voltage	ВУсво	30	-	-	V	Ic=50μA
Collector-emitter breakdown voltage	BVCEO	20	-	-	V	Ic=1mA
Emitter-base breakdown voltage	ВVево	6	-	-	V	Iε=50μA
Collector cutoff current	Ісво	-	-	1	μΑ	Vcb=20V
Emitter cutoff current	Іево	-	-	1	μΑ	Veb=5V
Collector-emitter saturation voltage	VCE(sat)	-	0.13	0.25	V	Ic/IB=4A/0.05A
Base-emitter saturation voltage	VBE(sat)	-	0.9	1.2	V	Ic/IB=4A/0.05A
DC current transfer ratio	hfe1	120	-	390	-	Vce/lc=2V/0.5A
DC current transfer ratio	hFE2	82	-	-	-	Vce=2V , Ic=4A
Transition frequency	f⊤	-	150	-	MHz	Vce=5V , Ie= -1.5A , f=50MHz
Output capacitance	Cob	-	220	-	pF	Vсв=10V , IE=0A , f=1MHz

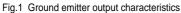


1/2

2SC5001

Transistors





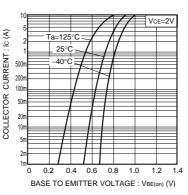


Fig.2 Ground emitter propagation characteristics

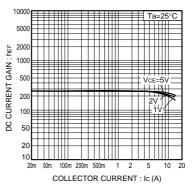
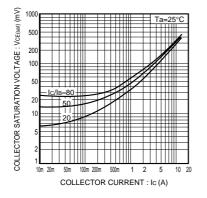
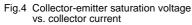


Fig.3 DC current gain vs. collector current





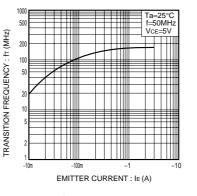


Fig.5 Gain bandwidth product vs. emitter current

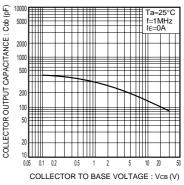


Fig.6 Collector output capacitance vs. collector-base voltage

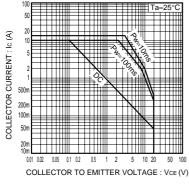


Fig.7 Safe operating area

Notes

- No technical content pages of this document may be reproduced in any form or transmitted by any means without prior permission of ROHM CO.,LTD.
- The contents described herein are subject to change without notice. The specifications for the product described in this document are for reference only. Upon actual use, therefore, please request that specifications to be separately delivered.
- Application circuit diagrams and circuit constants contained herein are shown as examples of standard use and operation. Please pay careful attention to the peripheral conditions when designing circuits and deciding upon circuit constants in the set.
- Any data, including, but not limited to application circuit diagrams information, described herein are intended only as illustrations of such devices and not as the specifications for such devices. ROHM CO.,LTD. disclaims any warranty that any use of such devices shall be free from infringement of any third party's intellectual property rights or other proprietary rights, and further, assumes no liability of whatsoever nature in the event of any such infringement, or arising from or connected with or related to the use of such devices.
- Upon the sale of any such devices, other than for buyer's right to use such devices itself, resell or otherwise dispose of the same, no express or implied right or license to practice or commercially exploit any intellectual property rights or other proprietary rights owned or controlled by
- ROHM CO., LTD. is granted to any such buyer.
- Products listed in this document are no antiradiation design.

The products listed in this document are designed to be used with ordinary electronic equipment or devices (such as audio visual equipment, office-automation equipment, communications devices, electrical appliances and electronic toys).

Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

About Export Control Order in Japan

Products described herein are the objects of controlled goods in Annex 1 (Item 16) of Export Trade Control Order in Japan.

In case of export from Japan, please confirm if it applies to "objective" criteria or an "informed" (by MITI clause) on the basis of "catch all controls for Non-Proliferation of Weapons of Mass Destruction.

ROHM