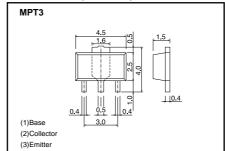
Medium power transistor (50V, 1A) 2SC5053

Features

- 1) Low saturation voltage, typically $V_{\text{CE(sat)}}{=}\,0.12\text{V}$ at $I_{\text{C}}/$ $I_B=500mA/50mA$
- 2) P_C=2W (on 40×40×0.7mm ceramic board)
- 3) Complements the 2SA1900

●Dimensions (Unit:mm)



Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit	
Collector-base voltage	Vсво	60	V	
Collector-emitter voltage	VCEO	50	V	
Emitter- base voltage	VEBO	5	V	
Collector current	Ic	1	А	
Collector current	IC IC	2	A (Pulse) *1	
Callantar navvar dissination	Pc	0.5	W	
Collector power dissipation	PC	2	W *2	
Collector power dissipation	tj	150	°C	
Storage temperature	tstg	-55 to +150	°C	

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Collector-base breakdown voltage	ВУсво	60	-	-	V	Ic=50μA
Collector-emitter breakdown voltage	BVceo	50	-	_	V	Ic=1mA
Emitter-base breakdown voltage	BV _{EBO}	5	_	_	V	Iε=50μA
Collector cutoff current	Ісво	-	_	0.1	μΑ	Vcb=40V
Emitter cutoff current	ІЕВО	-	-	0.1	μΑ	V _{EB} =4V
Collector-emitter saturation voltage	V _{CE(sat)}	_	_	0.4	V	Ic/Iв=500mA/50mA
DC current transfer ratio	hfe	120	_	390	-	Vce/lc=3V/0.5A
Transition frequency	f⊤	-	150	-	MHz	Vc==5V , I==-50mA , f=100MHz
Output capacitance	Cob	-	15	_	pF	Vcb=10V , IE=0A , f=1MHz

●Packaging specifications and hFE

Туре	2SC5053
Package	MPT3
h _{FE}	QR
Marking	CG *
Code	T100
Basic ordering unit (pleces)	1000

^{*} Denotes her

^{*1} Single pulse Pw=100ms *2 When mounted on a $40\times40\times0.7$ mm seramic board.

•Electric characteristics curves

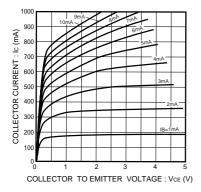


Fig.1 Grounded emitter output characteristics

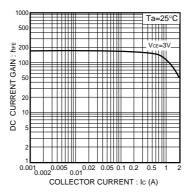


Fig.2 DC current gain vs. collector current

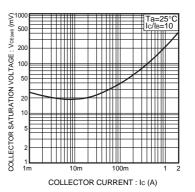


Fig.3 Collector-emitter saturation voltage vs.collector current

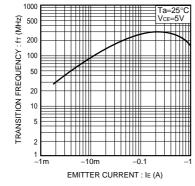


Fig.4 Gain bandwith product vs. emitter current

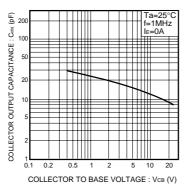


Fig.5 Collector output capacitance vs. collector-base voltage

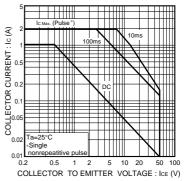


Fig.6 Safe operating area

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