Medium Power Transistor (25V, 1.2A)

2SD2537

Features

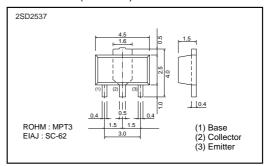
- 1) High DC current gain.
- 2) High emitter-base voltage. (VEBO=12V)
- 3) Low saturation voltage. (Max. VcE(sat)=0.3V at Ic/Iв=500mA/10mA)

● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit	
Collector-base voltage	Vсво	30	V	
Collector-emitter voltage	Vceo	25	V	
Emitter-base voltage	VEBO	12	V	
Collector current	lc	1.2	A (DC)	
	IC	2	A (Pulse)*1	
Collector power dissipation	Pc	0.5	W	
	PC	2	W *2	
Junction temperature	Tj	150	°C	
Storage temperature	Tstg	-55 to +150	°C	

^{*1} Single pulse Pw=100ms *2 When mounted on a 40×40×0.7mm ceramic board.

●Dimensions (Unit: mm)



●Packaging specifications and hFE

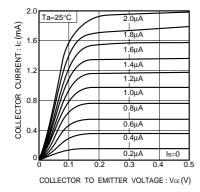
Type	2SD2537
Package	MPT3
hfE	V
Marking	DV
Code	T100
Basic ordering unit (pieces)	1000

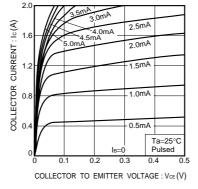
●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions	
Collector-base breakdown voltage	ВУсво	30	-	-	V	Ic=10μA	
Collector-emitter breakdown voltage	BVceo	25	-	-	V	Ic=1mA	
Emitter-base breakdown voltage	ВУево	12	-	-	V	Iε=10μA	
Collector cutoff current	Ісво	-	-	0.3	μΑ	Vcb=30V	
Emitter cutoff current	ІЕВО	_	-	0.3	μΑ	V _{EB} =12V	
Collector-emitter saturation voltage	VCE(sat)	-	-	0.3	V	Ic/I _B =500mA/10mA	*
Base-emitter saturation voltage	V _{BE} (sat)	_	-	1.2	V	Ic/I _B =0.5A/10mA	
DC current transfer ratio	hfe	820	-	1800	_	Vce/Ic=5V/0.5A	
Transition frequency	f⊤	-	200	_	MHz	Vc=10V, I=-50mA, f=100MHz	*
Output capacitance	Cob	-	20	-	pF	Vcb=10V, IE=0A, f=1MHz	

^{*}Measured using pulse current.

Electrical characteristics curves





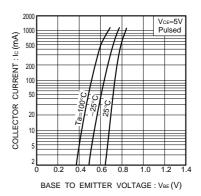
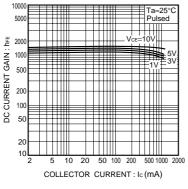
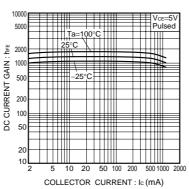


Fig.1 Ground emitter output characteristics(I)

Fig.2 Ground emitter output characteristics (II)

Fig.3 Ground emitter propagation characteristics





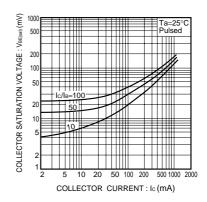
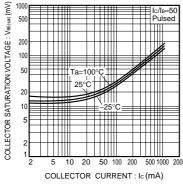
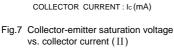


Fig.4 DC current gain vs. collector current (I) Fig.5 DC current gain vs. collector current (II)

Fig.6 Collector-emitter saturation voltage vs. collector current (I)





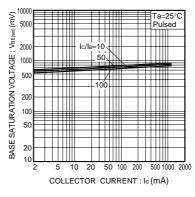


Fig.8 Base-emitter saturation voltage vs. collector current (I)

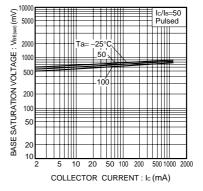


Fig.9 Base-emitter saturation voltage vs. collector current (II)

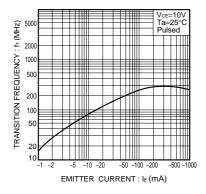


Fig.10 Gain bandwidth product vs. emitter current

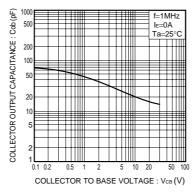


Fig.11 Collector output capacitance vs. collector-base voltage

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