

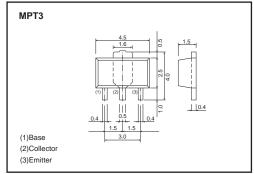
Medium Power Transistor (-60V, -2A)

2SB1561

●Features

- 1) Low saturation voltage , typically $V_{CE\ (sat)} = -0.15V$ at Ic / IB = -1A / -50mA.
- 2) Collector-emitter voltage = −60V
- 3) Pc = 2W (on $40\times40\times0.7$ mm ceramic board).
- 4) Complements the 2SD2391.

●Dimensions (Unit : mm)



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol Limits		Unit	
Collector-base voltage	Vсво	-60	V	
Collector-emitter voltage	Vceo	-60	V	
Emitter-base voltage	VEBO	-6	V	
Collector current	Ic	-2	A	
	Іср	-6	A *1	
Collector power dissipation	Pc	0.5	14/	
	PC	2	W *2	
Junction temperature	Tj	150	°C	
Storage temperature	Tstg	-55 to +150	°C	

^{*1} Single pulse, Pw=10ms

●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	-60	_	_	V	Ic=-1mA	
Emitter-base breakdown voltage	ВVево	-6	_	-	V	I _E =-50μA	
Collector cutoff current	Ісво	_	-	-0.1	μΑ	Vcb=-50V	
Emitter cutoff current	Гево	_	-	-0.1	μΑ	V _{EB} =-5V	
Collector-emitter saturation voltage	VCE(sat)	_	-0.15	-0.35	V	Ic/I _B =-1A/-50mA	*
DC current transfer ratio	hFE1	120	_	270	-	Vce/Ic=-2V/-0.5A	
	hFE2	45	-	-	_	Vce/Ic=-2V/-1.5A	
Transition frequency	f⊤	-	200	-	MHz	Vce=-2V, Ie=0.5A, f=100MHz	*
Output capacitance	Cob	_	23	-	pF	Vcb=-10V, Ie=0A, f=1MHz	

^{*} Measured using pulse current

●Packaging specifications and hFE

Туре	2SB1561
Package	MPT3
hfe	Q
Marking	BL*
Code	T100
Basic ordering unit (pieces)	1000

^{*}Denotes hre

^{*2} When mounted on a 40×40×0.7mm ceramic board.

2SB1561 Data Sheet

• Electrical characteristic curves

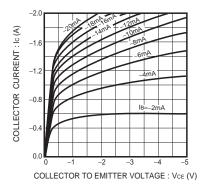


Fig.1 Grounded emitter output characteristics

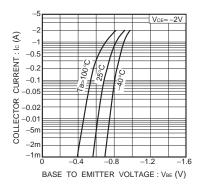


Fig.2 Grounded emitter propagation characteristics

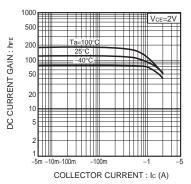


Fig.3 DC current gain vs. collector current (I)

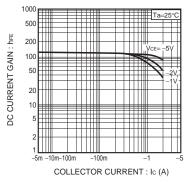


Fig.4 DC current gain vs. collector current (II)

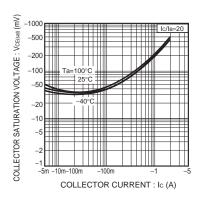


Fig.5 Collector-emitter saturation voltage vs. collector current (I)

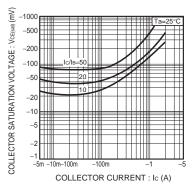


Fig.6 Collector-emitter saturation voltage vs. collector current (II)

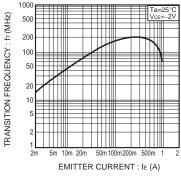


Fig.7 Gain bandwidth product vs. emitter current

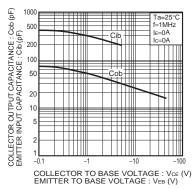


Fig.8 Collector output capacitance vs. collector-base voltage Emitter input capacitance vs. emitter-base voltage

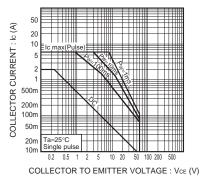


Fig.9 Safe operating area

Notes

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