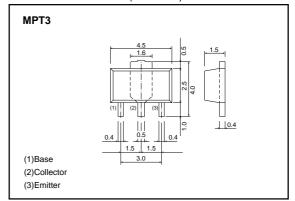
Power transistor (50V, 3A) 2SD1963

Features

- 1) Low saturation voltage, typically $V_{CE(sat)} = -0.45V \text{ (Max.) at Ic/IB} = -1.5\text{A}/-0.15\text{A}.$
- 2) Excellent DC current gain characteristics.
- 3) Complements the 2SB1308.

●External dimensions (Unit : mm)



● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol Limits		Unit	
Collector-base voltage	Vсво	50	V	
Collector-emitter voltage	Vceo	20	V	
Emitter-base voltage	VEBO	6	V	
Collector current	1-	3	A(DC)	
	lc lc	5	A(Pulse) *1	
Collector power dissipation	D-	0.5	W	
	Pc	2.0	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	50	_	_	V	Ic=50μA
Collector-emitter breakdown voltage	BVceo	20	_	_	V	Ic= 1mA
Emitter-base breakdown voltage	ВУево	6	_	_	V	Iε= 50μA
Collector cutoff current	Ісво	_	_	0.5	μΑ	Vcb=40V
Emitter cutoff current	ІЕВО	-	_	0.5	μΑ	V _{EB} =5V
DC current transfer ratio	hfe	180	_	560	_	Vce=2V, Ic=0.5A *
Collector-emitter saturation voltage	VCE(sat)	-	0.25	0.45	V	Ic/I _B =1.5A/ 0.15A *
Transition frequency	f⊤	-	150	-	MHz	Vce=6V, Ie= -50mA, f=100MHz
Output capacitance	Cob	_	35	_	pF	Vcb=20V, Ie=0A, f=1MHz

^{*} Measured using pulse current.

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

●Packaging specifications and hFE

Туре	2SD1963
Package	MPT3
hfE	RS
Marking	DG*
Code	T100
Basic ordering unit (pieces)	1000

^{*} Denotes hFE

•Electrical characteristic curves

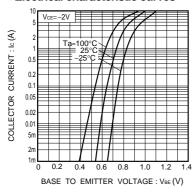


Fig.1 Grounded emitter propagation characteristics

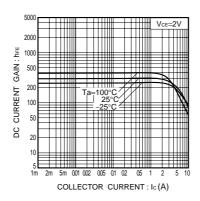


Fig.2 DC current gain vs. collector current

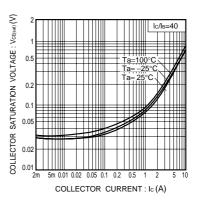


Fig.3 Collector-emitter saturation voltage vs. collector current

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