

High voltage discharge, High speed switching, Low Noise (-60V, -3A)

2SA2072

Features

- 1) High speed switching. (tf : Typ. : 20ns at Ic = -3A)
- 2) Low saturation voltage, typically.

(Typ. : -200mV at Ic = -2.0A, IB = -200mA)

- 3) Strong discharge power for inductive load and capacitance load.
- 4) Low Noise.
- 5) Complements the 2SC5825.

Applications

High speed switching, Low noise

●Structure

PNP silicon epitaxial planar transistor

Packaging specifications

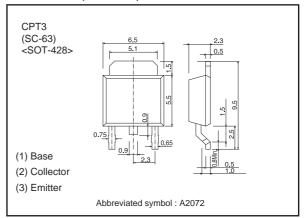
	Package	Taping
Туре	Code	TL
	Basic ordering unit (pieces)	2500
2SA2072		0

● 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		Vево	-6	V
Collector ourrent	DC	lc	-3	А
Collector current	Pulsed	Icp *1	-6	А
Power dissipation		Pc	1.0 *2	W
		PC	10.0 *3	W
Junction temperature		tj	150	°C
Range of storage temperature		tstg -55 to 150		°C

^{*1} Pw=100ms

●Dimensions (Unit: mm)



^{*2} Ta=25°C *3 Tc=25°C

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Condition
Collector-emitter breakdown voltage	BVceo	-60	_	_	V	Ic=-1mA
Collector-base breakdown voltage	ВУсво	-60	_	_	V	Ic=-100μA
Emitter-base breakdown voltage	ВУево	-6	_	_	V	IE=-100μA
Collector cut-off current	Ісво	_	_	-1.0	μΑ	VcB=-20V
Emitter cut-off current	ІЕВО	_	_	-1.0	μΑ	V _{EB} =-4V
Collector-emitter saturation voltage	VCE (sat)	_	-200	-500	mV	Ic=-2A
						I _B =-0.2A
DC current gain	hfe	120	_	270	_	Vce=-2V
DC current gain						Ic=-100mA
	*1	_	180	_	MHz	Vc=-10V
Transistor frequency	fτ					IE=100mA
						f=10MHz
	Cob	_	50	_	pF	VcB=-10V
Collector output capacitance						IE=0mA
						f=1MHz
Turn-on time	ton *2	_	20	_	ns	Ic=-3A
Storage time	tstg *2	_	150	_	ns	I _{B1} = -300mA I _{B2} =300mA
Fall time	tf *2	_	20	_	ns	Vcc≒-25V

●hfe RANK

Q	
120–270	

•Electrical characteristics curves

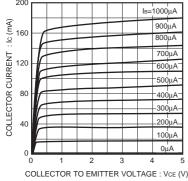


Fig.1 Typical output characteristics

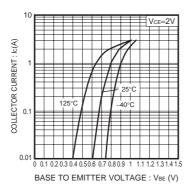


Fig.2 Grounded emitter propagation characteristics

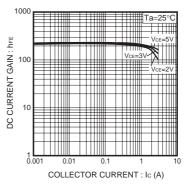


Fig.3 DC current gain vs.collector current (I)

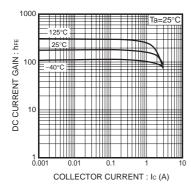


Fig.4 DC current gain vs.collector current (II)

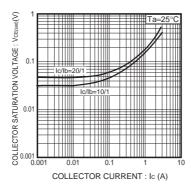


Fig.5 Collector-emitter saturation voltage vs.collector current (I)

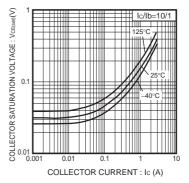


Fig.6 Collector-emitter saturation voltage vs.collector current (II)

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^{*1} Non repetitive pulse *2 See switching characteristics measurement circuits

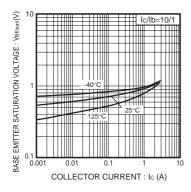


Fig.7 Base-emitter saturation voltage vs. collector current

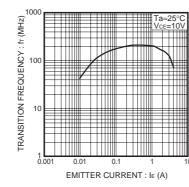


Fig.8 Transition frequency

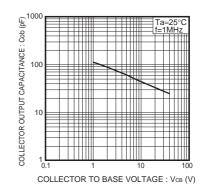


Fig.9 Collector output capacitance

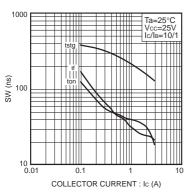
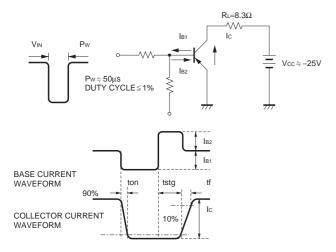


Fig.10 Switching Time

•Switching characteristics measurement circuits



Notes

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