

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

2SA2073

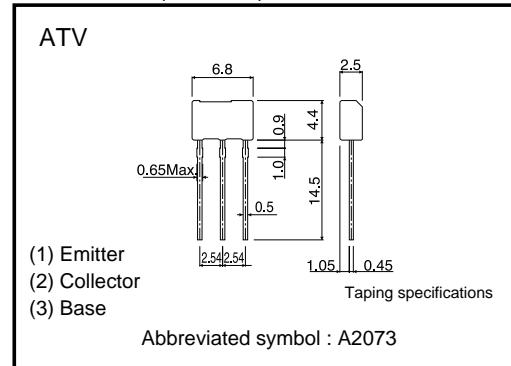
● Features

- 1) High speed switching. (If Typ. : $t_{f} = 20\text{ns}$ at $I_c = -3\text{A}$)
- 2) Low saturation voltage, typically.
(Typ. : -200mV at $I_c = -2.0\text{A}$, $I_B = -200\text{mA}$)
- 3) Strong discharge power for inductive load and
capacitance load.
- 4) Low Noise.
- 5) Complements the 2SC5826.

● Applications

High speed switching, Low noise

●Dimensions (Unit : mm)



● Structure

PNP silicon epitaxial planar transistor

●Packaging specifications

Type	Package	Taping
	Code	TV2
	Basic ordering unit (pieces)	2500
2SA2073		<input type="radio"/>

- **Absolute maximum ratings (Ta=25°C)**

Parameter	Symbol	Limits	Unit	
Collector-base voltage	V_{CBO}	-60	V	
Collector-emitter voltage	V_{CEO}	-60	V	
Emitter-base voltage	V_{EBO}	-6	V	
Collector current	DC	I_C	-3	A
	Pulsed	I_{CP}	-6	A *
Power dissipation	P_C	1.0	W	
Junction temperature	t_j	150	°C	
Range of storage temperature	t_{stg}	-55 to 150	°C	

*Pw=10ms

Transistors

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Collector-emitter breakdown voltage	BV_{CEO}	-60	—	—	V	$I_C=-1mA$
Collector-base breakdown voltage	BV_{CBO}	-60	—	—	V	$I_C=-100\mu A$
Emitter-base breakdown voltage	BV_{EBO}	-6	—	—	V	$I_E=-100\mu A$
Collector cut-off current	I_{CBO}	—	—	-1.0	μA	$V_{CB}=-40V$
Emitter cut-off current	I_{EBO}	—	—	-1.0	μA	$V_{EB}=-4V$
Collector-emitter saturation voltage	$V_{CE(\text{sat})}$	—	-200	-500	mV	$I_C=-2.0A$ $I_B=-200mA$
DC current gain	h_{FE}	120	—	270	—	$V_{CE}=-2V$ $I_C=-100mA$
Transistor frequency	f_T	—	200	—	MHz	$V_{CE}=-10V$ $I_E=100mA$ $f=10MHz$
Collector output capacitance	C_{OB}	—	40	—	pF	$V_{CB}=-10V$ $I_E=0mA$ $f=1MHz$
Turn-on time	t_{on}	—	20	—	ns	$I_C=-3A$
Storage time	t_{stg}	—	130	—	ns	$I_{B1}=-300mA$
Fall time	t_f	—	20	—	ns	$I_{B2}=300mA$ $V_{CC}=-25V$

*1 Single pulse

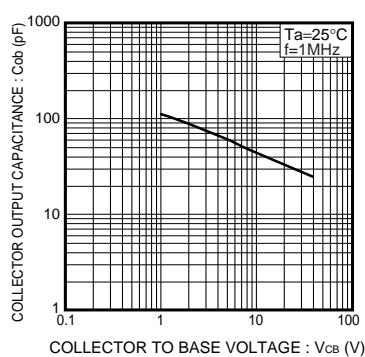
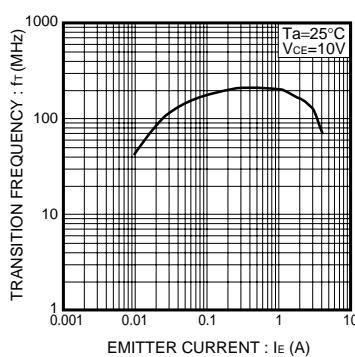
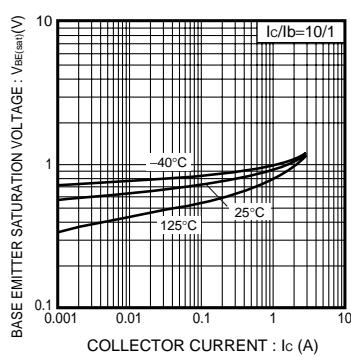
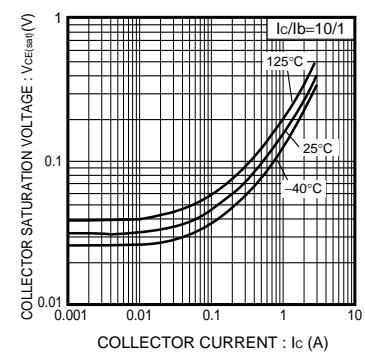
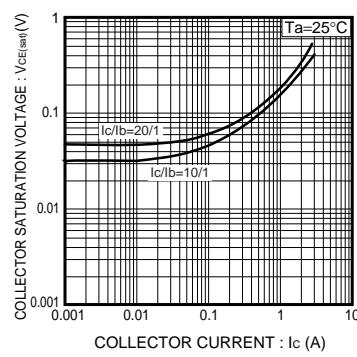
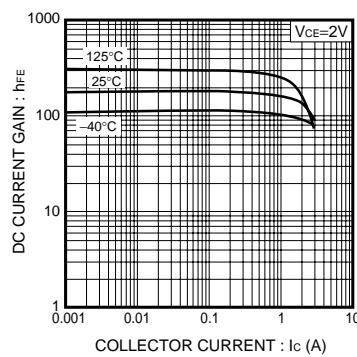
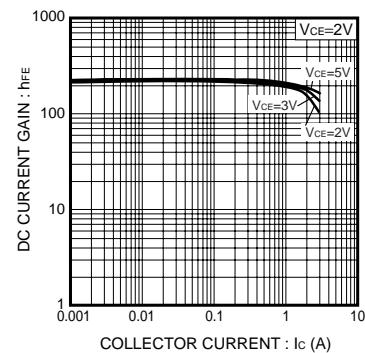
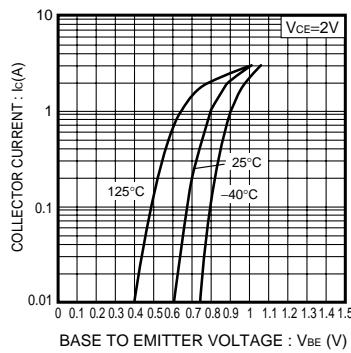
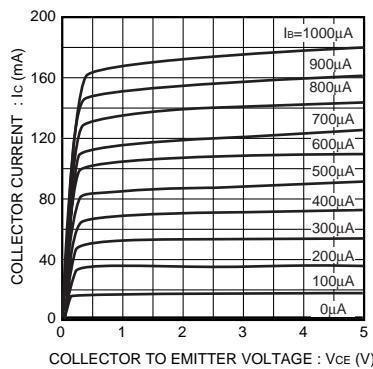
*2 See switching characteristics measurement circuits

● h_{FE} RANK

Q
120-270

Transistors

●Electrical characteristics curves



Transistors

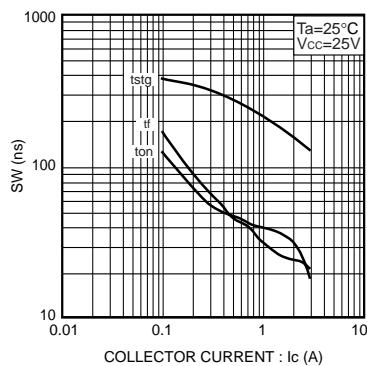


Fig.3 Switching Time

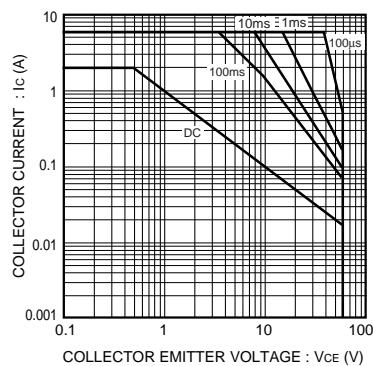
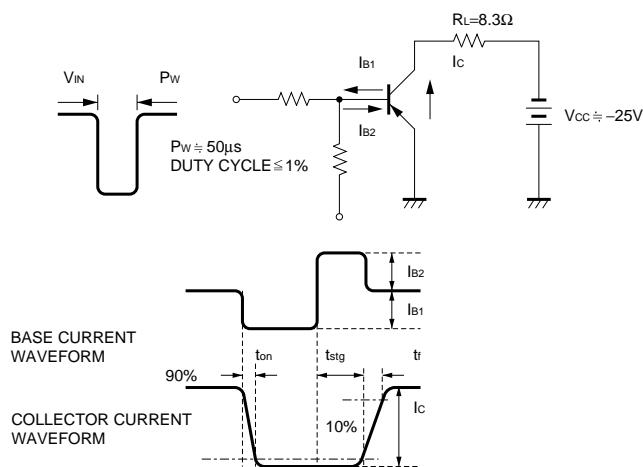


Fig.11 Safe operating area

●Switching characteristics measurement circuits



Appendix

Notes

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