

2SD2049

# **Driver Applications**

## **Applications**

· Motor drivers, printer hammer drivers, relay drivers, voltage regulator control.

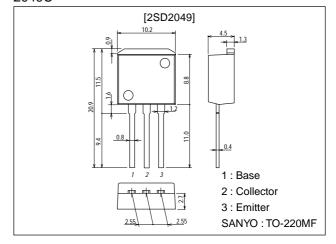
### **Features**

- · Suitable for sets whose height is restricted.
- · High DC current gain.
- · Large current capacity and wide ASO.

# **Package Dimensions**

unit:mm

2049C



## **Specifications**

### Absolute Maximum Ratings at Ta = 25°C

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Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CBO</sub>		110	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>		100	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		6	V
Collector Current	IC		5	Α
Collector Current (Pulse)	I <sub>CP</sub>		8	Α
Collector Dissipation	PC		1.65	W
		Tc=25°C	35	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

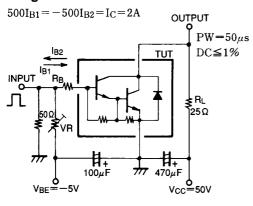
#### Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Oill
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =80V, I <sub>E</sub> =0			0.1	mA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0			3.0	mA
DC Current Gain	hFE	V <sub>CE</sub> =3V, I <sub>C</sub> =2.5A	1500	4000		
Gain-Bandwidth Product	fT	V <sub>CE</sub> =5V, I <sub>C</sub> =2.5A		20		MHz
Collector-to-Emitter Saturation Voltage	VCE(sat)	I <sub>C</sub> =2.5A, I <sub>B</sub> =5mA		0.9	1.5	V
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =2.5A, I <sub>B</sub> =5mA			2.0	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	I <sub>C</sub> =5mA, I <sub>E</sub> =0	110			V
Collector-to-Emitter Breakdown Voltage	V <sub>(BR)</sub> CEO	I <sub>C</sub> =50mA, R <sub>BE</sub> =∞	100			V

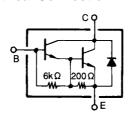
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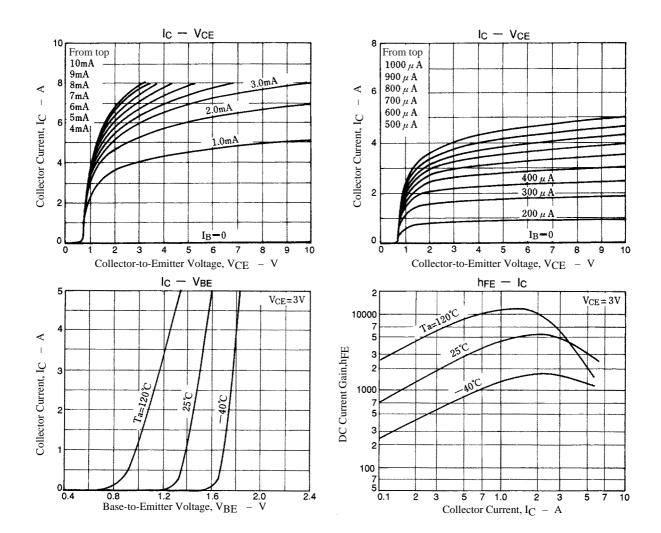
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	. 01111
Turn-ON Time	ton	See specified test circuit.		0.6		μs
Storage Time	t <sub>stg</sub>	See specified test circuit.		4.8		μs
Fall Time	t <sub>f</sub>	See specified test circuit.		1.6		μs

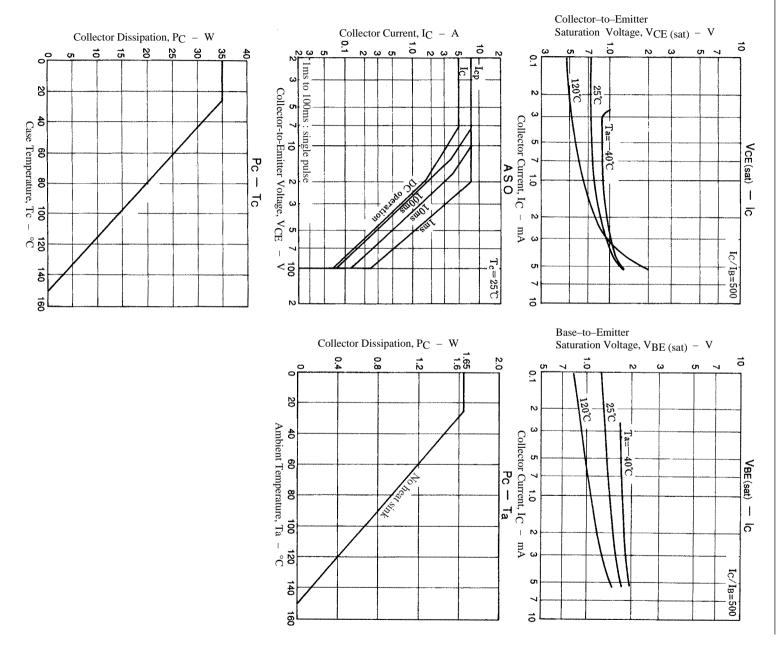
### **Switching Time Test Circuit**



#### **Electrical Connection**







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