



# 900V/20mA Switching Applications

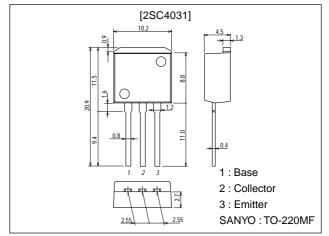
#### **Features**

- · High breakdown voltage (V<sub>CEO</sub> min=900V).
- · Small Output Capacitance ( $C_{ob}$  typ=1.6pF).
- · Wide ASO (adoption of MBIT process).
- $\cdot$  High reliability (adoption of HVP process).

## **Package Dimensions**

unit:mm

2049C



### **Specifications**

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

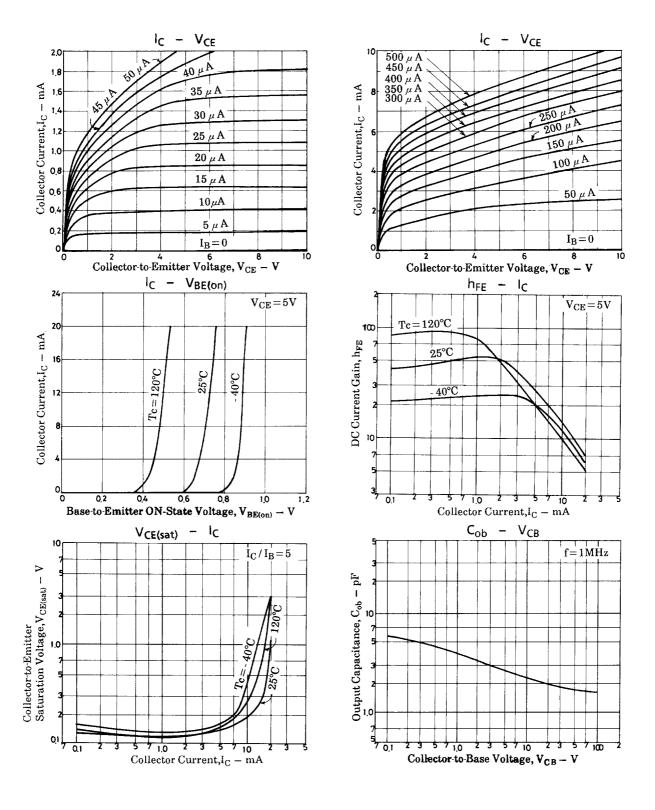
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CBO</sub>		2000	V
Collector-to-Emitter Voltage	VCEO		900	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		5	V
Collector Current	IC		20	mA
Collector Current (Pulse)	I <sub>CP</sub>		60	mA
Collector Dissipation	PC		1.65	W
		Tc=25°C	1.2	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

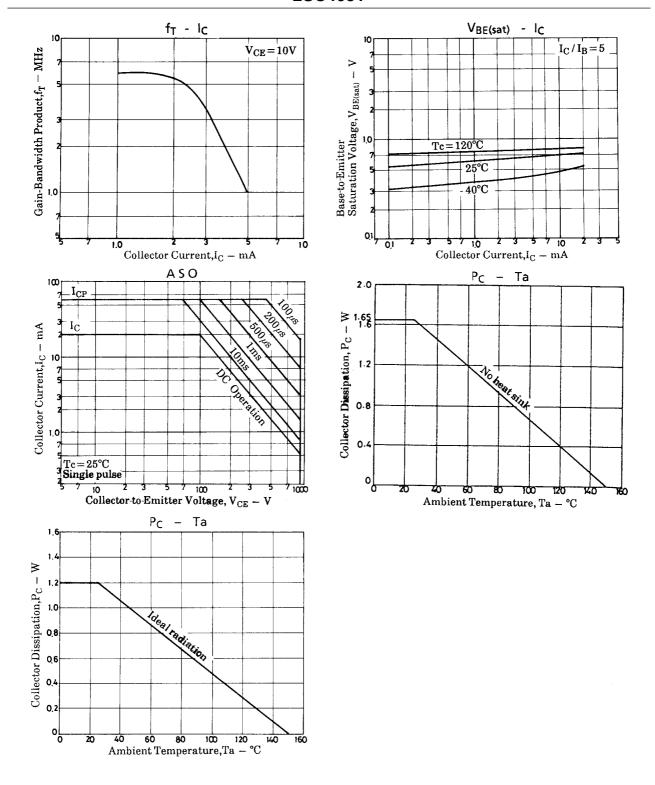
### Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	l Oille
Collector Cutoff Current	ICBO	V <sub>CB</sub> =900V, I <sub>E</sub> =0			1	μΑ
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =4V, I <sub>C</sub> =0			1	μΑ
DC Current Gain	hFE	V <sub>CE</sub> =5V, I <sub>C</sub> =1mA	20	50	120	
Gain-Bandwidth Product	fT	V <sub>CE</sub> =10V, I <sub>C</sub> =1mA		6		MHz
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =2mA, I <sub>B</sub> =400μA			5	V
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	$I_C$ =2mA, $I_B$ =400 $\mu$ A			2	V

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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	l Oille
Collector-to-Base Breakdown Voltage	V(BR)CBO	I <sub>C</sub> =1mA, I <sub>E</sub> =0	2000			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	900			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	$I_E=1$ mA, $I_C=0$	5			V
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =100V, f=1MHz		1.6		pF





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