



# 800V/20mA Switching Applications

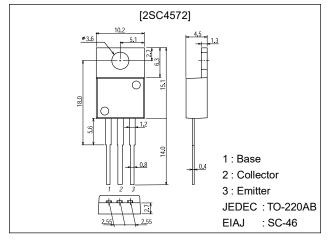
#### **Features**

- · High breakdown voltage.
- · Small Cob.
- $\cdot$  High reliability (Adoption of HVP process).

### **Package Dimensions**

unit:mm

2010C



## **Specifications**

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

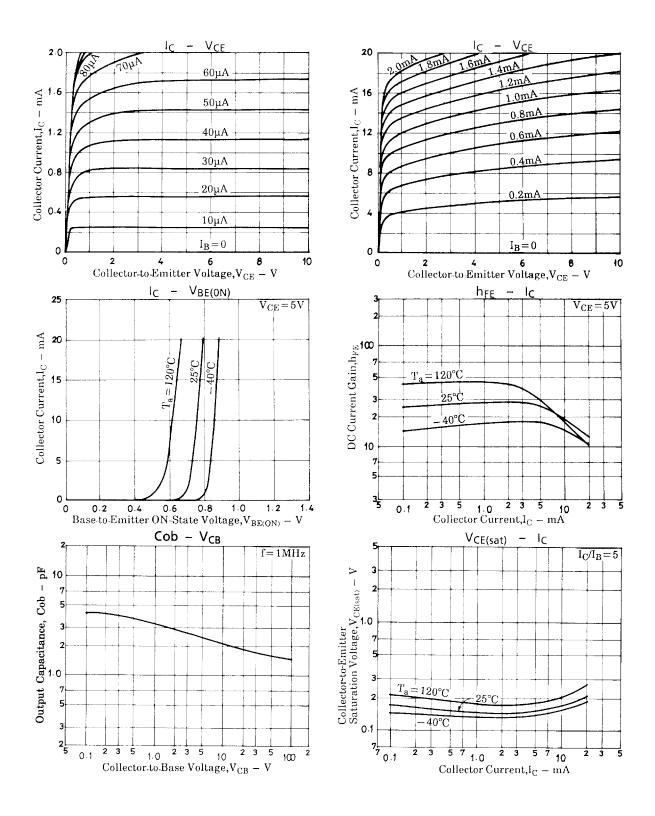
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CBO</sub>		800	V
Collector-to-Emitter Voltage	VCEO		800	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		7	V
Collector Current	IC		20	mA
Collector Current (Pulse)	I <sub>CP</sub>		60	mA
Collector Dissipation	PC		1.75	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

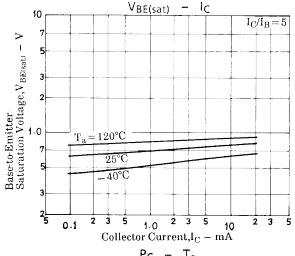
#### Electrical Characteristics at Ta = 25°C

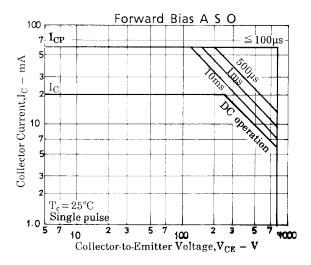
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Ullit
Collector Cutoff Current	ICBO	V <sub>CB</sub> =800V, I <sub>E</sub> =0			1	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0			1	μA
DC Current Gain	h <sub>FE</sub> 1	V <sub>CE</sub> =5V, I <sub>C</sub> =2mA	20		50	
	h <sub>FE</sub> 2	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	10			
Gain-Bandwidth Product	fT	V <sub>CE</sub> =10V, I <sub>C</sub> =2mA		40		MHz
Output Capacitance	Cob	V <sub>CB</sub> =100V, f=1MHz		1.6		pF
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =2mA			1	V
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =2mA			1.5	V

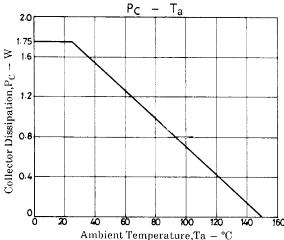
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Collector-to-Base Breakdown Voltage	V(BR)CBO	I <sub>C</sub> =100μA, I <sub>E</sub> =0	800			V
Collector-to-Emitter Breakdown Voltage	V <sub>(BR)</sub> CEO	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	800			V
Emitter-to-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100μA, I <sub>C</sub> =0	7			V
Thermal Resistance	R <sub>th(j-c)</sub>	Junction – Case			8.3	°C/w









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