

High Voltage Switching Transistor

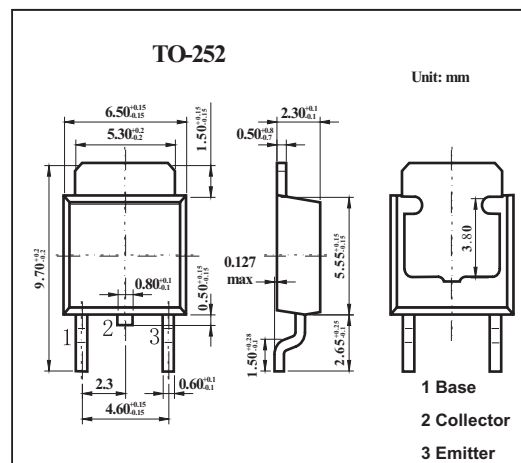
2SC5161

■ Features

- Low $V_{CE(sat)}$.

$$V_{CE(sat)} = 0.15V \text{ (Typ.)}, I_C / I_B = 1A / 0.2A$$

- High breakdown voltage. $V_{CEO} = 400V$
- Fast switching. $t_r = 1.0\mu s, I_C = 0.8A$
- NPN silicon transistor

■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	400	V
Collector to emitter voltage	V_{CES}	400	V
Emitter to base voltage	V_{EBO}	7	V
Peak collector current *	I_{CP}	4	A(Puse)
Collector current	I_C	2	A(DC)
Collector power dissipation $T_C = 25^\circ C$ $T_a = 25^\circ C$	P_C	10	W
		1	
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$

* Single pulse $p_w = 10ms$

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BVCBO	Ic=50μA	400			V
collector-emitter breakdown voltage	BVCEO	Ic=1mA	400			V
collector-emitter voltage	VCEO(SUS)	Ic=1.0A, Ib1=0.1A, L=1mH	400			V
Emitter-base breakdown voltage	BVEBO	Ie=50μA	7			V
collector cutoff current	ICBO	VCB=400V			10	μA
Emitter cutoff current	IEBO	VEB=7V			10	μA
Collector to emitter saturation voltage	VCE(sat)	Ic/Ib=1A/0.2A			1	V
Base to emitter saturation voltage	VBE(sat)	Ic/Ib=1A/0.2A			1.5	V
DC current transfer ratio	hFE	VCE=5V, Ic=0.1A	25		50	
Transition frequency	fr	VCE=10V, Ie=-0.1A, f=5MHz		10		MHz
Output capacitance	cob	VCB=10V, Ie=0A, f=1MHz		30		pF
Turn-on time	ton	Ic=0.8A, RL=250Ω			1	μs
Storage time	tstg	Ib1=-Ib2=0.08A			2.5	μs
Fall time	tr	VCC=200V			1	μs

■ hFE Classification

Item	B
hFE	25 to 50