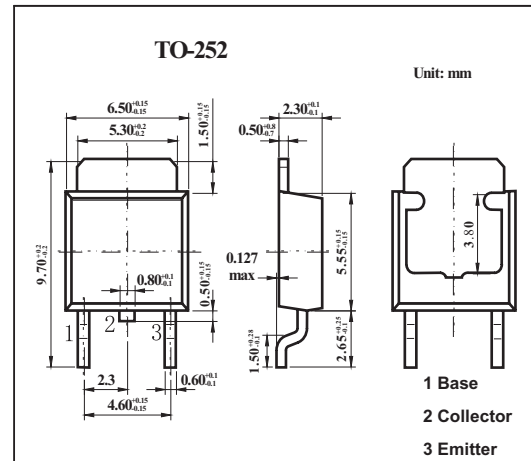


High Voltage Switching Transistor

2SC5161

■ Features

- Low $V_{CE(sat)}$.
 $V_{CE(sat)} = 0.15V$ (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	P_C	$T_C = 25^\circ C$	W
		$T_a = 25^\circ C$	
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	BV _{CB0}	I _c =50μA	400			V
collector-emitter breakdown voltage	BV _{CEO}	I _c =1mA	400			V
collector-emitter voltage	V _{CEO(SUS)}	I _c =1.0A, I _{B1} =0.1A, L=1mH	400			V
Emitter-base breakdown voltage	BV _{EB0}	I _E =50μA	7			V
collector cutoff current	I _{CB0}	V _{CB} =400V			10	μA
Emitter cutoff current	I _{EB0}	V _{EB} =7V			10	μA
Collector to emitter saturation voltage	V _{CE(sat)}	I _c /I _B =1A/0.2A			1	V
Base to emitter saturation voltage	V _{BE(sat)}	I _c /I _B =1A/0.2A			1.5	V
DC current transfer ratio	hFE	V _{CE} =5V, I _c =0.1A	25		50	
Transition frequency	f _r	V _{CE} =10V, I _E =-0.1A, f=5MHz		10		MHz
Output capacitance	c _{ob}	V _{CB} =10V, I _E =0A, f=1MHz		30		pF
Turn-on time	t _{on}	I _c =0.8A, R _L =250Ω			1	μs
Storage time	t _{stg}	I _{B1} =-I _{B2} =0.08A			2.5	μs
Fall time	t _f	V _{CC} =200V			1	μs

■ hFE Classification

Item	B
hFE	25 to 50