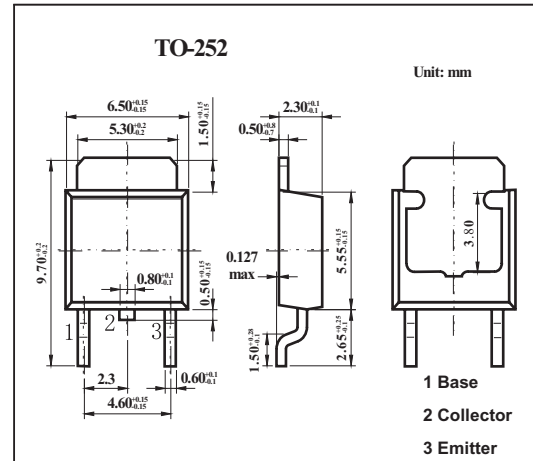


## 2SC4332-Z

### ■ Features

- Low collector saturation voltage.
- Fast switching speed.
- High DC current gain.



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CBO</sub>	100	V
Collector-emitter voltage	V <sub>CEO</sub>	60	V
Emitter-base voltage	V <sub>EBO</sub>	7	V
Collector current	I <sub>C</sub>	5	A
Collector current (pulse) *	I <sub>CP</sub>	10	A
Base current	I <sub>B</sub>	2.5	A
Total power dissipation	P <sub>T</sub>	1	W
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

\* PW ≤ 10 ms, duty cycle ≤ 50%



**2SC4332-Z**

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector to Emitter Voltage	V <sub>CEO(SUS)</sub>	I <sub>C</sub> = 3.0 A, I <sub>B</sub> = 0.3 A, L = 1 mH	60			V
Collector to Emitter Voltage	V <sub>CES(SUS)</sub>	I <sub>C</sub> = 3.0 A, I <sub>B1</sub> = -I <sub>B2</sub> = 0.3 A, V <sub>BE(OFF)</sub> = -1.5 V, L = 180 μH,	60			V
Collector Cut-off Current	I <sub>CBO</sub>	V <sub>CE</sub> = 60 V, I <sub>E</sub> = 0			10	μA
Collector Cut-off Current	I <sub>CER</sub>	V <sub>CE</sub> = 60 V, R <sub>BE</sub> = 51Ω, T <sub>A</sub> = 125°C			1.0	mA
Collector Cut-off Current	I <sub>CX1</sub>	V <sub>CE</sub> = 60 V, V <sub>BE(OFF)</sub> = -1.5 V			10	μA
Collector Cut-off Current	I <sub>CX2</sub>	V <sub>CE</sub> = 60 V, V <sub>BE(OFF)</sub> = -1.5 V, T <sub>A</sub> = 125°C			1.0	mA
Emitter Cut-off Current	I <sub>EBO</sub>	V <sub>EB</sub> = 5.0 V, I <sub>C</sub> = 0			10	μA
DC Current Gain	h <sub>FE1</sub>	V <sub>CE</sub> = 2.0 V, I <sub>C</sub> = 0.5 A	100			
DC Current Gain	h <sub>FE2</sub>	V <sub>CE</sub> = 2.0 V, I <sub>C</sub> = 1.0 A	100		400	
DC Current Gain	h <sub>FE3</sub>	V <sub>CE</sub> = 2.0 V, I <sub>C</sub> = 3.0 A	60			
Collector Saturation Voltage	V <sub>CE(sat)1</sub>	I <sub>C</sub> = 3.0 A, I <sub>B</sub> = 0.15 A			0.3	V
Collector Saturation Voltage	V <sub>CE(sat)2</sub>	I <sub>C</sub> = 4.0 A, I <sub>B</sub> = 0.2 A			0.5	V
Base Saturation Voltage	V <sub>BE(sat)1</sub>	I <sub>C</sub> = 3.0 A, I <sub>B</sub> = 0.15 A			1.2	V
Base Saturation Voltage	V <sub>BE(sat)2</sub>	I <sub>C</sub> = 4.0 A, I <sub>B</sub> = 0.2 A			1.5	V
Collector Capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1.0 MHz		130		pF
Gain Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = 10 V, I <sub>E</sub> = -0.5 A		150		MHz
Turn-on Time	t <sub>on</sub>	I <sub>C</sub> = 3.0 A, R <sub>L</sub> = 16.7Ω, I <sub>B1</sub> = -I <sub>B2</sub> = 0.15 A, V <sub>CC</sub> = 50 V			0.3	μs
Storage Time	t <sub>stg</sub>				1.5	μs
Fall Time	t <sub>f</sub>				0.3	μs

■ hFE Classification

Marking	M	L	K
hFE	100~200	150~300	200~400