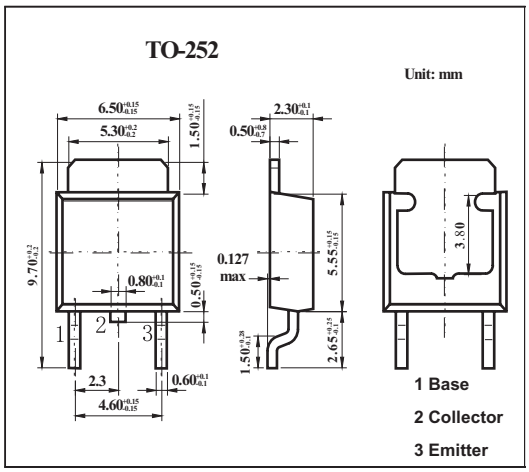
NPN Silicon Epitaxia

2SC4332-Z



■ Features

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

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	100	V
Collector-emitter voltage	V_{CEO}	60	V
Emitter-base voltage	V_{EBO}	7	V
Collector current	I_C	5	A
Collector current (pulse) *	I_{CP}	10	A
Base current	I_B	2.5	A
Total power dissipation	P_T	1	W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* PW ⩽ 10 ms, duty cycle ⩽ 50%

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector to Emitter Voltage	$V_{CEO(SUS)}$	I_C = 3.0 A, I_B = 0.3 A, L = 1 mH	60			V
Collector to Emitter Voltage	$V_{CEX(SUS)}$	I_C = 3.0 A, I_{B1} = -I_{B2} = 0.3 A,$V_{BE(OFF)}$ = -1.5 V, L = 180 μH,	60			V
Collector Cut-off Current	I_{CBO}	V_{CE} = 60 V, I_E = 0			10	μA
Collector Cut-off Current	I_{CER}	V_{CE} = 60 V, R_{BE} = 51Ω, T_A = 125□C			1.0	mA
Collector Cut-off Current	I_{CEX1}	V_{CE} = 60 V, $V_{BE(OFF)}$ = -1.5 V			10	μA
Collector Cut-off Current	I_{CEX2}	V_{CE} = 60 V, $V_{BE(OFF)}$ = -1.5 V,T_A = 125℃			1.0	mA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 5.0 V, I_C = 0			10	μA
DC Current Gain	h_{FE1}	V_{CE} = 2.0 V, I_C = 0.5 A	100			
DC Current Gain	h_{FE2}	V_{CE} = 2.0 V, I_C = 1.0 A	100		400	
DC Current Gain	h_{FE3}	V_{CE} = 2.0 V, I_C = 3.0 A	60			
Collector Saturation Voltage	$V_{CE(sat)1}$	I_C = 3.0 A, I_B = 0.15 A			0.3	V
Collector Saturation Voltage	$V_{CE(sat)2}$	I_C = 4.0 A, I_B = 0.2 A			0.5	V
Base Saturation Voltage	$V_{BE(sat)1}$	I_C = 3.0 A, I_B = 0.15 A			1.2	V
Base Saturation Voltage	$V_{BE(sat)2}$	I_C = 4.0 A, I_B = 0.2 A			1.5	V
Collector Capacitance	C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1.0 MHz		130		pF
Gain Bandwidth Product	f_T	V_{CE} = 10 V, I_E = -0.5 A		150		MHz
Turn-on Time	t_{on}	I_C = 3.0 A, R_L = 16.7Ω,			0.3	μs
Storage Time	t_{stg}	I_{B1} = -I_{B2} = 0.15 A, V_{CC} =50 V			1.5	μs
Fall Time	t_f				0.3	μs

■ h_{FE} Classification

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