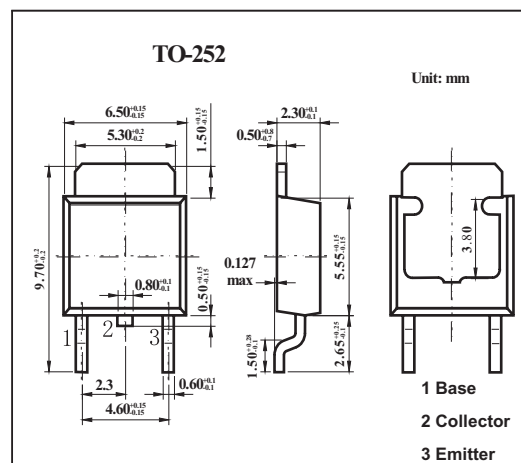


NPN Silicon Epitaxia

2SC3518-Z

■ Features

- Low $V_{CE(sat)}$.
- Fast switching speed.
- High DC current gain.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	60	V
Collector-emitter voltage	V_{CEO}	60	V
Emitter-base voltage	V_{EBO}	7	V
Collector current	I_C	5	A
Collector current (pulse) *1	I_{CP}	7	A
Total power dissipation *2	P_T	2	W
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

*1 $PW \leq 10 \text{ ms}$, duty cycle $\leq 50\%$

*2 When mounted on ceramic substrate of $7.5\text{cm}^2 \times 0.7\text{mm}$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 50\text{V}$, $I_E = 0$			10	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 7\text{V}$, $I_C = 0$			10	μA
DC current gain *	h_{FE}	$V_{CE} = 1\text{V}$, $I_C = 2\text{A}$	100		400	V
		$V_{CE} = 1\text{V}$, $I_C = 5\text{A}$	50			
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 2\text{A}$, $I_B = 0.2\text{A}$			0.3	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C = 2\text{A}$, $I_B = 0.2\text{A}$			1.2	V
Gain bandwidth product	f_T	$V_{CE} = 10\text{V}$, $I_E = 500\text{mA}$		120		MHz
Turn-on time	t_{on}	$V_{CC} = 10\text{V}$, $R_L = 5\Omega$		0.07	1	μs
Storage time	t_{stg}	$I_C = 2\text{A}$,		0.8	2.5	μs
Turn-off time	t_{off}	$I_{B1} = -I_{B2} = 0.2\text{A}$		0.12	1	μs

*. $PW \leq 350\mu\text{s}$, duty cycle $\leq 2\%$

■ h_{FE} Classification

Marking	M	L	K
h_{FE}	100~200	150~300	200~400