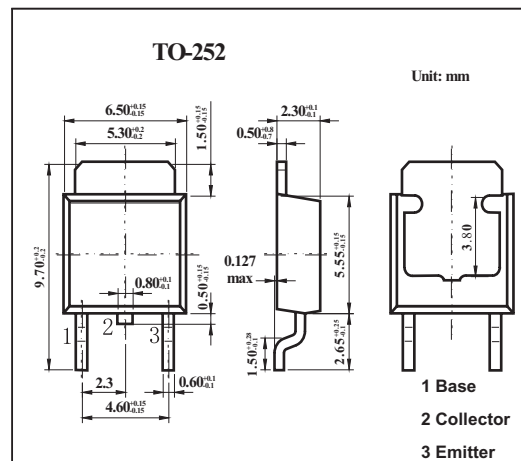


PNP Silicon Transistor

2SA1413-Z

■ Features

- High Voltage: $V_{CE0}=-600V$
- High speed: $t_r \leq 1.0\mu s$

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

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-600	V
Collector to Emitter Voltage	V_{CEO}	-600	V
Emitter to Base Voltage	V_{EBO}	-7	V
Collector Current (DC)	I_C	-1	A
Collector Current (Pulse) *1	I_C	-2	A
Total power Dissipation ($T_a=25^\circ C$) *2	P_T	2	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to 150	$^\circ C$

*1 $p_w \leq 10ms$, Duty Cycle $\leq 50\%$

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

2SA1413-Z■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=-600V, I_E=0$			-10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-7V, I_C=0$			-10	μA
DC Current Gain*	h_{FE}	$V_{CE}=-5V, I_C=-0.1A$	30	58	120	
		$V_{CE}=-5V, I_C=-0.5A$	5	19		
Collector Saturation Voltage *	$V_{CE(sat)}$	$I_C=-0.3A, I_B=-60mA$		-0.28	-1	V
Base Saturation Voltage *	$V_{BE(sat)}$	$I_C=-0.3A, I_B=-60mA$		-0.85	-1.2	V
Gain Bandwidth Product	f_T	$V_{CE}=-10V, I_E=-50mA$		28		MHz
Output Capacitance	C_{ob}	$V_{CB}=-10V, I_E=0, f=1.0MHz$		42		pF
Turn-on Time	t_{on}	$I_C=-0.5A, R_L=500\Omega$ $I_{B1}=-I_{B2}=-0.1A, V_{CC}=-250V$		0.1	0.5	μs
Storage Time	t_{stg}			3.5	5.0	
Fall time	t_f			0.08	0.5	

* $PW \leq 350\mu\text{s}$, Duty Cycle $\leq 2\%$ ■ h_{FE} Classification

Marking	M	L	K
h_{FE}	30 to 60	40 to 80	60 to 120