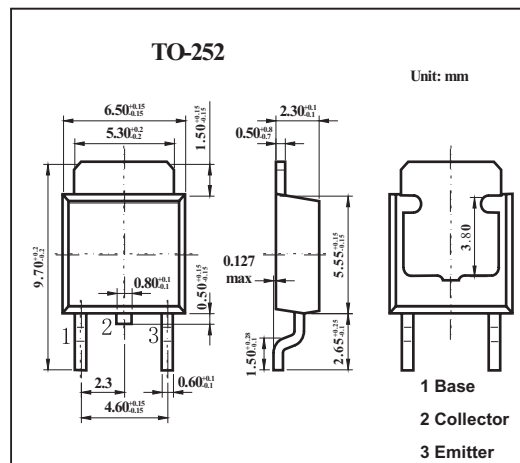


2SA1413-Z

■ 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 Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector Cutoff Current	IcBO	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 =500Ω 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 ≤ 350μs, Duty Cycle ≤ 2%

■ hFE Classification

Marking	M	L	K
hFE	30 to 60	40 to 80	60 to 120