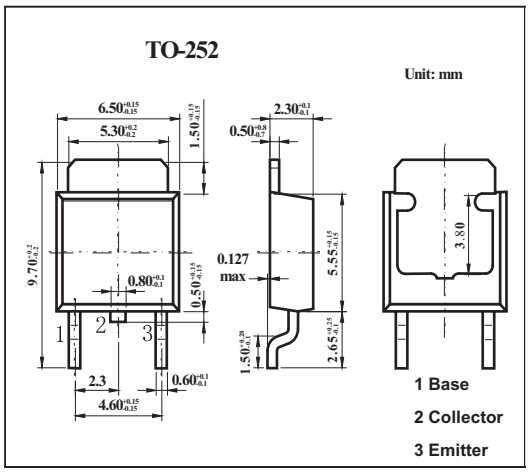
Silicon Power Transistors

2SA1615-Z



■ Features

- Large current capacity.
- High hFE and low collector saturation voltage.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-30	V
Collector-emitter voltage	V_{CEO}	-20	V
Emitter-base voltage	V_{EBO}	-10	V
Collector current	I_C	-10	A
Collector current pulse	I_{cp} *	-15	A
Base current	I_B	-0.5	A
Total power dissipation	P_T	1.0	W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* PW ⩽ 10 ms, duty cycle ⩽ 50%

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = -20V, I_E=0			-1	μA
Emitter cutoff current	I_{EBO}	V_{EB} = -8V, I_C=0			-1	μA
DC current gain *	h_{FE}	V_{CE} = -2V , I_C = -0.5A	200		600	
		V_{CE} = -2.0 V, I_C =-4.0 A	160			
Collector-emitter saturation voltage *	$V_{CE(sat)}$	I_C = -4A , I_B = -0.05A		-0.2	-0.25	V
Base saturation voltage *	$V_{BE(sat)}$	I_C = -4A , I_B = -0.05A		-0.9	-1.2	
Gain bandwidth product	f_T	V_{CE} = -5V , I_E = 1.5A		180		MHz
Output capacitance	C_{ob}	V_{CB} = -10V , I_E = 0 , f = 1.0MHz		220		pF
Turn-on time	t_{on}	I_C = -5.0 A, I_{B1} = -I_{B2} = 0.125 A,		80		ns
Storage time	t_{stg}	R_L = 2.0 Ω , V_{CC} = -10 V		300		ns
Fall time	t_f			60		ns

* Pulse test: tp ⩽ 350 μs; d ⩽ 0.02.

■ hFE Classification

Marking	L	K
hFE	200～400	300～600