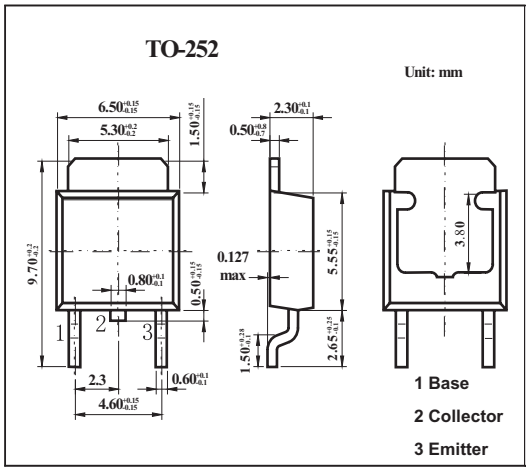
TY Semicondutor®

Product specification

2SD1584-Z



■ Features

- Low $V_{CE(sat)}$.
- High hFE.

■ Absolute Maximum Ratings Ta = 25℃

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 (DC)	I_C	3	A
Collector Current (pulse) *1	I_{CP}	5	A
Total power dissipation Ta = 25℃*2	P_T	2	W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* 1Pulse Test PW ≤ 10ms, Duty Cycle ≤ 50%.

*2 when mounted on ceramic substrate of 7.5cm^2 X0.7mm

2SD1584-Z

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 60 V, I_E = 0			10	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 5 V, I_C = 0			10	μA
DC current gain *	h_{FE}	V_{CE} = 5 V, I_C = 50 mA	600	1650		
		V_{CE} = 5 V, I_C = 500 mA	800	1800	3200	
		V_{CE} = 5 V, I_C = 3A	500	1400		
Collector saturation voltage *	$V_{CE(sat)}$	I_C = 2.0 A, I_B = 20 mA		0.25	0.5	V
Base saturation voltage *	$V_{BE(sat)}$	I_C = 2.0 A, I_B = 20 mA		0.8	1.2	V
Gain bandwidth product	f_T	V_{CE} = 5 V, I_E = -100 mA	50	120		MHz
Output capacitance	C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1.0 MHz		20		pF
Turn-on time	ton	I_C = 2 A,V_{CC} = 10 V		0.9		μs
Storage time	tstg	I_{B1}=-I_{B2}=20 mA		2.6		μs
Fall time	tf	R_L=5Ω		1		μs

* Pulsed: PW ⩽ 350 μs, duty cycle ⩽ 2%

■ h_{FE} Classification

Marking	M	L	K
hFE	800～1600	1000～2000	1600～3200