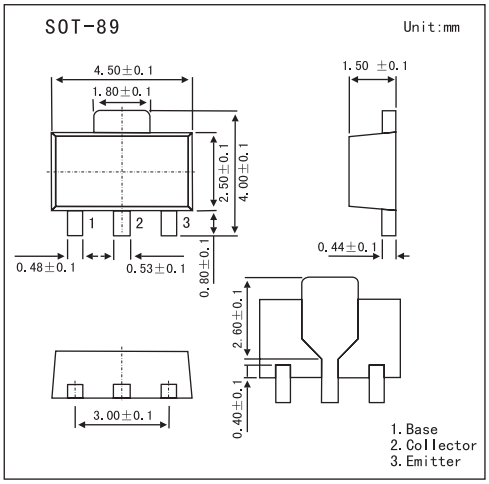
NPN Silicon Epitaxial Transistor
2SD1614



■ Features

- World standard miniature package.
- High dc current gain.
- Low $V_{CE(sat)}$.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	40	V
Collector-emitter voltage	V_{CEO}	20	V
Emitter-base voltage	V_{EBO}	6	V
Collector current (DC)	I_C	2	A
Collector Current (pulse) *	I_C	3	A
Total power dissipation	P_T	2.0	W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

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

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 30 V, I_E = 0 A			100	nA
Emitter cutoff current	I_{EBO}	V_{EB} = 6.0 V, I_C = 0 A			100	nA
DC current gain *	h_{FE}	V_{CE} = 2.0 V, I_C = 100 mA	135	350	600	
Collector saturation voltage *	$V_{CE(sat)}$	I_C = 2 A, I_B = 50 mA		0.3	0.5	V
Base saturation voltage *	$V_{BE(sat)}$	I_C = 2 A, I_B = 50 mA		0.95	1.2	V
Base-emitter voltage *	V_{BE}	V_{CE} = 6.0 V, I_C = 100 mA	650	680	750	mV
Gain bandwidth product	f_T	V_{CE} = 10 V, I_E = -50 mA		200		MHz
Output capacitance	C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1.0 MHz		28		pF

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

■ h_{FE} Classification

Marking	XM	XL	XK
hFE	135～270	200～400	300～600