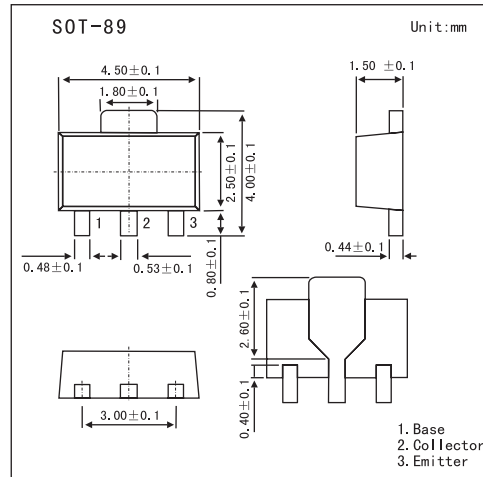


# 2SD1614

■ Features

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



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	40	V
Collector-emitter voltage	$V_{CE0}$	20	V
Emitter-base voltage	$V_{EB0}$	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	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

\* Pulse Test  $PW \leq 10\text{ms}$ , Duty Cycle  $\leq 50\%$ .

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	$I_{cB0}$	$V_{CB} = 30\text{ V}, I_E = 0\text{ A}$			100	nA
Emitter cutoff current	$I_{EB0}$	$V_{EB} = 6.0\text{ V}, I_c = 0\text{ A}$			100	nA
DC current gain *	$h_{FE}$	$V_{CE} = 2.0\text{ V}, I_c = 100\text{ mA}$	135	350	600	
Collector saturation voltage *	$V_{CE(sat)}$	$I_c = 2\text{ A}, I_B = 50\text{ mA}$		0.3	0.5	V
Base saturation voltage *	$V_{BE(sat)}$	$I_c = 2\text{ A}, I_B = 50\text{ mA}$		0.95	1.2	V
Base-emitter voltage *	$V_{BE}$	$V_{CE} = 6.0\text{ V}, I_c = 100\text{ mA}$	650	680	750	mV
Gain bandwidth product	$f_T$	$V_{CE} = 10\text{ V}, I_E = -50\text{ mA}$		200		MHz
Output capacitance	$C_{ob}$	$V_{CB} = 10\text{ V}, I_E = 0, f = 1.0\text{ MHz}$		28		pF

\* Pulsed:  $PW \leq 350\ \mu\text{s}$ , duty cycle  $\leq 2\%$

■ hFE Classification

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