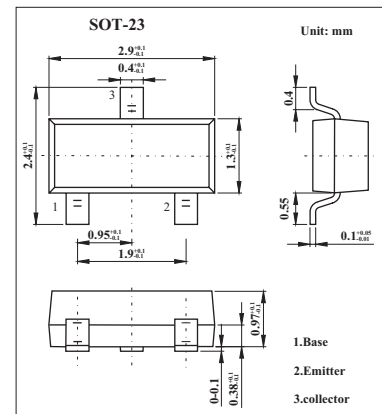


## NPN Epitaxial Planar Silicon Transistors

## 2SD1048

## ■ Features

- Ultrasmall package allows miniaturization in end products.
- Large current capacity ( $I_c=0.7A$ ) and low-saturation voltage.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	20	V
Collector-emitter voltage	$V_{CEO}$	15	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_c$	0.7	A
Collector current (pulse)	$I_{CP}$	1.5	A
Collector dissipation	$P_C$	200	mW
Junction temperature	$T_j$	125	$^\circ C$
Storage temperature	$T_{stg}$	-55 to +125	$^\circ C$

■ Electrical Characteristics  $T_a = 25^\circ C$ 

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CB0}$	$V_{CB} = 15V, I_E = 0$			0.1	$\mu A$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 4V, I_c = 0$			0.1	$\mu A$
DC current Gain	$h_{FE}$	$V_{CE} = 2V, I_c = 50mA$	200		900	
Gain bandwidth product	$f_T$	$V_{CE} = 10V, I_c = 50mA$		250		MHz
Output capacitance	$C_{ob}$	$V_{CB} = 10V, f = 1MHz$		8		pF
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 5mA, I_B = 0.5mA$		10	25	mV
	$V_{CE(sat)}$	$I_c = 100mA, I_B = 10mA$		30	80	mV

■  $h_{FE}$  Classification

Marking	X6	X7	X8
$h_{FE}$	200~400	300~600	450~900