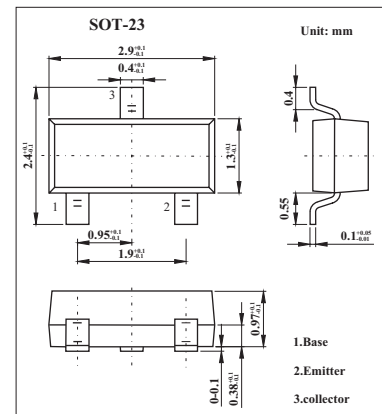


NPN Epitaxial Planar Silicon Transistors

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	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4V, I_c = 0$			0.1	μA
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