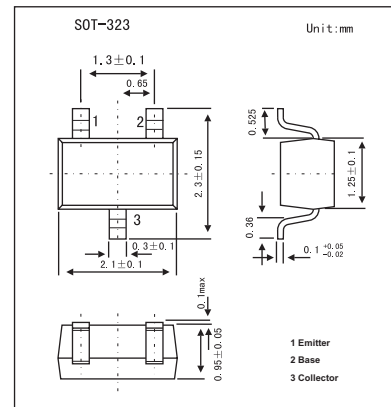


NPN Epitaxial Planar Silicon Transistor

2SC4446

■ Features

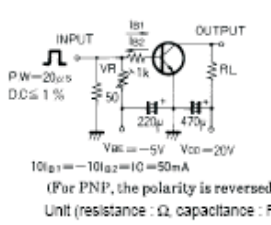
- Very small-sized package
- High VEBO.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	60	V
Collector-emitter voltage	V_{CE0}	50	V
Emitter-base voltage	V_{EBO}	15	V
Collector current	I_C	150	mA
Collector current(Pulse)	I_{CP}	300	mA
Base current	I_B	30	mA
Collector dissipation	P_C	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

2SC4446

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cutoff current	IcBO	V _{CB} = 40V, I _E =0			0.1	μA	
Emitter cutoff current	I _E BO	V _{EB} = 10V, I _C =0			0.1	μA	
DC current gain	h _{FE}	V _{CE} = 6V, I _C = 1mA	135		600		
Gain bandwidth product	f _T	V _{CE} = 6V, I _C = 1mA		130		MHz	
Collector-to-emitter saturation voltage	V _{CE(sat)}	I _C = 50mA, I _B = 5mA		0.15	0.5	V	
Base-to-emitter saturation voltage	V _{BE(sat)}	I _C = 50mA, I _B = 5mA		0.85	1.2	V	
Collector-to-base breakdown voltage	V _{(BR)CBO}	I _C = 10μA, I _E = 0	60			V	
Collector-to-emitter breakdown voltage	V _{(BR)CEO}	I _C = 1mA, R _{BE} = ∞	50			V	
Emitter-to-base breakdown voltage	V _{(BR)EBO}	I _E = 10μA, I _C = 0	15			V	
Output capacitance	C _{ob}	V _{CB} = 6V, f = 1MHz		2.2		pF	
Turn-on time	ton	 <p> PW=20μs D.C.≤1% V_{BE}=-5V V_{CE}=20V I_{C1}=-I_{B2}=I_C=50mA (For PNP, the polarity is reversed.) Unit (resistance : Ω, capacitance : F) </p>		50		ns	
Storage time	tstg				590		ns
Fall time	tf				110		ns

■ hFE Classification

Marking	H		
Rank	5	6	7
hFE	135~270	200~400	300~600