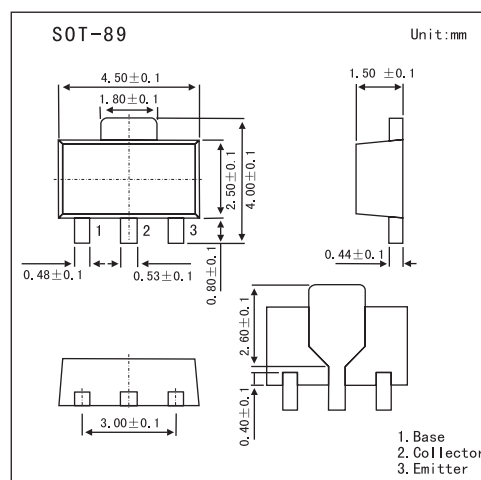


NPN Epitaxial Planar Silicon Transistor

2SD1628

■ Features

- Low saturation voltage.
- High h_{FE} .
- Large current capacity.
- Very small size making it easy to provide highdensity, small-sized hybrid IC's.

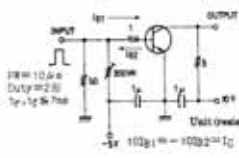
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	60	V
Collector-emitter voltage	V_{CEO}	20	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	5	A
Collector current (pulse)	I_{CP}	8	A
Collector dissipation	P_C	500	mW
	P_{C^*}	1.5	W
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* Mounted on ceramic board(250mm2X0.8mm)

2SD1628

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

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit	
Collector cutoff current	ICBO	V _{CB} = 50 V , I _E =0			100	nA	
Emitter cutoff current	IEBO	V _{EB} = 5 V , I _C =0			100	nA	
DC current gain	hFE	V _{CE} = 2 V , I _C = 0.5 A	120		560		
Gain bandwidth product	f _r	V _{CE} = 10 V , I _C = 50 mA		120		MHz	
Output capacitance	C _{ob}	V _{CB} = 10 V , f = 1.0MHz		45		pF	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 3 A , I _B = 60 mA			500	mV	
Base-emitter saturation voltage	V _{BE(sat)}	I _C = 3 A , I _B = 60 mA			1.5	V	
Collector-base breakdown voltage	V(BR)CBO	I _C = 10μA , I _E = 0	60			V	
Collector-emitter breakdown voltage	V(BR)CEO	I _C = 1mA , R _{BE} = ∞	20			V	
Emitter-base breakdown voltage	V(BR)EBO	I _E = 10μA , I _C = 0	6			V	
Turn-on timie	ton	Switching Time Test Circuit  PBM = 10 W Duty = 2:1 Tr = 10 ns Tmb = 10 ns Load (resistance: Ω, capacitance: pF)		30		ns	
Storage time	tstg				300		ns
Turn-off time	tf				40		ns

■ h_{FE} Classification

Marking	DK		
Rank	E	F	G
h_{FE}	120~200	160~320	280~560