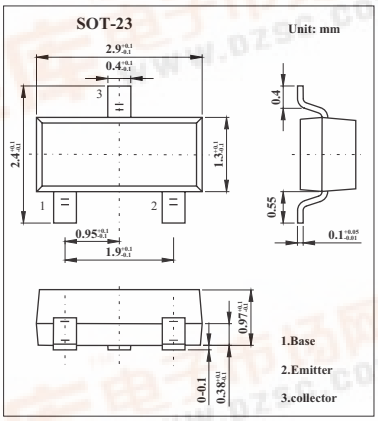
Silicon NPN Epitaxial Planar Type

2SD814,2SD814A



Features

- High collector-emitter voltage V_{CEO}
- Low noise voltage NV

Absolute Maximum Ratings Ta = 25℃

Parameter		Symbol	Rating	Unit
Collector-base voltage	2SD814	V_{CBO}	150	V
	2SD814A		185	V
Collector-emitter voltage	2SD814	V_{CEO}	150	V
	2SD814A		185	V
Emitter-base voltage		V_{EBO}	5	V
Collector current		I_C	50	mA
Peak collector current		I_{CP}	100	mA
Collector power dissipation		P_C	200	mW
Junction temperature		T_j	150	℃
Storage temperature		T_{stg}	-55 to +150	℃

Electrical Characteristics Ta = 25℃

Parameter		Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base cutoff current		I_{CBO}	V_{CB} = 100 V, I_E = 0			1	μA
Collector-emitter voltage	2SD814	V_{CEO}	I_C = 100 μA, I_B = 0	150			V
	2SD814A			185			V
Emitter-base voltage		V_{EBO}	I_E = 10 μA, I_C = 0	5			V
Forward current transfer ratio		h_{FE}	V_{CE} = 5 V, I_C = 10 mA	90		330	
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C = 30 mA, I_B = 3 mA			1	V
Transition frequency		f_T	V_{CE} = 10 V, I_C = -10 mA, f = 200 MHz		150		MHz
Collector output capacitance		C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1 MHz		2.3		pF
Noise voltage		NV	V_{CE} = 10 V, I_C = 1 mA, G_V = 80 dB Rg = 100 kΩ , Function = FLAT		150		mV

h_{FE} Classification

Marking	2SD814	PQ	PR	PS
	2SD814A	LQ	LR	LS
Rank		Q	R	S
h_{FE}		90～155	130～220	185～330