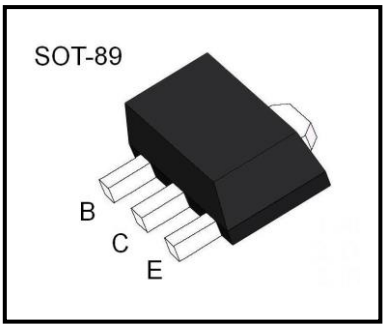
Application

• Low frequency amplifier,driver



Features

• Low $V_{CE(sat)}$:$V_{CE(sat)}$ = 350mV, (I_C/I_B=500mA/25mA)

• Complement to 2SAR293P5T100-CN

Marking: NV

Absolute Maximum Rating (Ta=25℃)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	30	V
Collector-Emitter Voltage	BV_{CEO}	30	V
Emitter-Base Voltage	BV_{EBO}	6	V
Collector Current	I_C	1	A
Collector Current Pulse *1	I_{CP}	2	A
Collector Power Dissipation *2	P_C	0.5	W
		2	
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-55～150	℃

Electrical Characteristics (Ta=25℃)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	I_C = 10μA，I_E = 0	30			V
Collector-emitter breakdown voltage	BV_{CEO}	I_C = 1mA，I_B = 0	30			V
Emitter-base breakdown voltage	BV_{EBO}	I_E = 10μA，I_C = 0	6			V
Collector -base cut-off current	I_{CBO}	V_{CB} = 30V，I_E = 0			100	nA
Emitter- base cut-off current	I_{EBO}	V_{EB} = 6V，I_C = 0			100	nA
DC current gain	h_{FE}	V_{CE}= 2V，I_C= 100mA	270		680	
Collector-emitter saturation voltage*	$V_{CE(sat)}$	I_C = 500mA, I_B = 25mA		120	350	mV
Transition frequency *	f_T	V_{CE} = 2V, I_E= 100mA		320		MHz
Output capacitance	C_{ob}	V_{CB}=10V, I_E=0A, f=1MHz		7		pF
Turn on time	t_{on}	I_C=500mA,I_{B1}=25mA		90		ns
Storage time	t_s	I_{B2}=-25mA,V_{CC}=5V		300		ns
Fall time	t_f	R_L=10Ω		60		ns

***** 1 Single pulse Pw=10ms
2 Each terminal mounted on a reference land
3 Mounted on a ceramic board (40 × 40 × 0.7mm)

Typical Characteristics

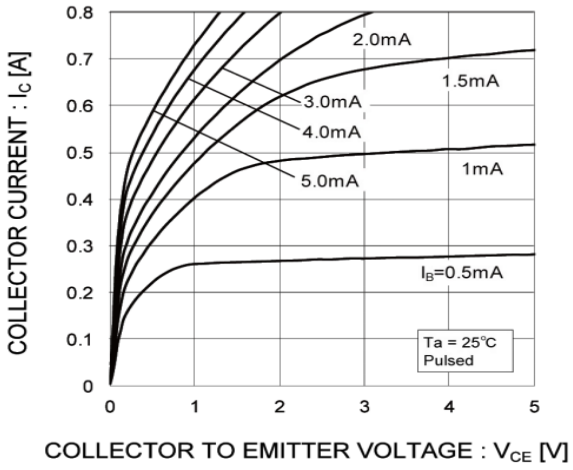


Figure 1. Static Characteristic

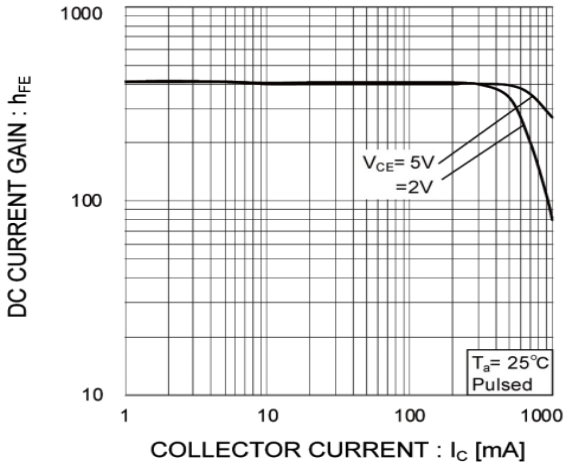


Figure 2. DC current Gain

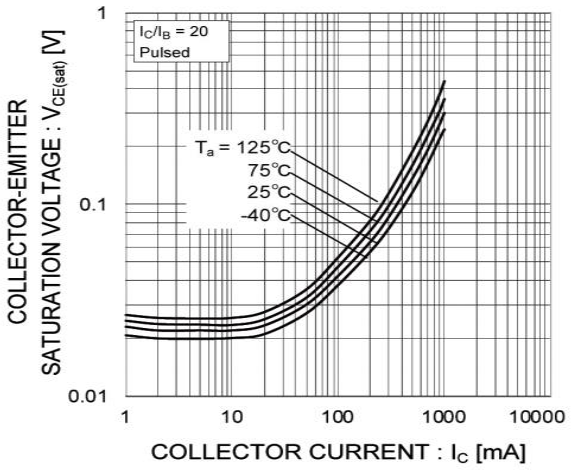


Figure 3. Collector-Emitter Saturation Voltage

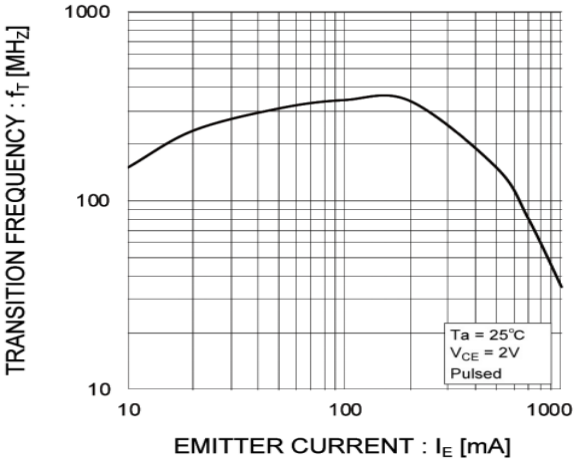


Figure 4. Current Gain Bandwidth Product

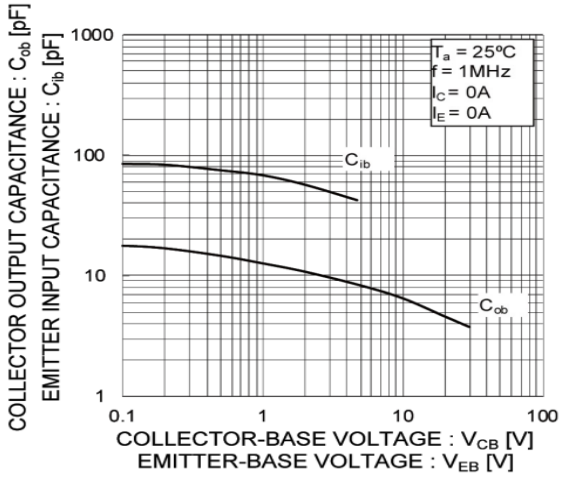


Figure 5. Collector Output Capacitance

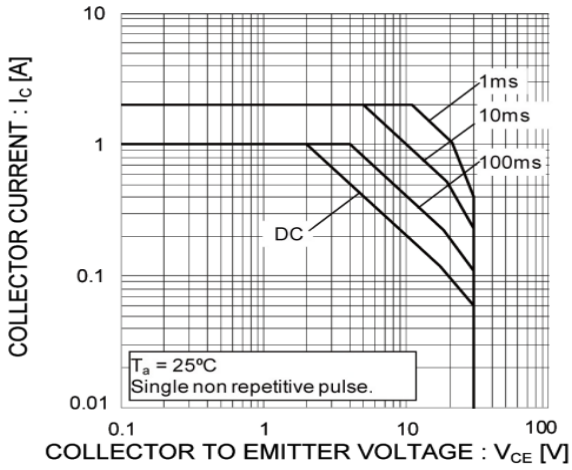
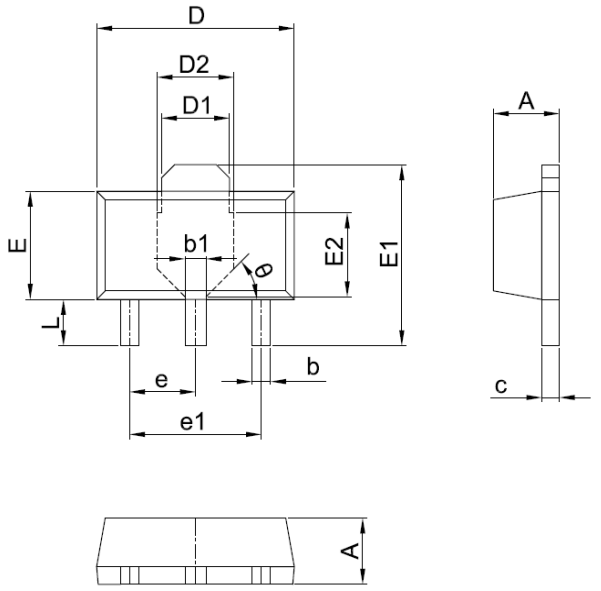


Figure 6. Safe Operating Area

Package Dimensions



Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.40	1.60	0.055	0.063
b	0.32	0.52	0.013	0.020
b1	0.38	0.58	0.015	0.023
c	0.35	0.45	0.014	0.018
D	4.40	4.60	0.173	0.181
D1	1.45	1.65	0.057	0.065
D2	1.70	1.80	0.067	0.071
E	2.30	2.60	0.091	0.102
E1	3.95	4.25	0.156	0.167
E2	1.80	2.00	0.071	0.079
e	1.40	1.60	0.055	0.063
e1	2.80	3.20	0.110	0.126
L	0.90	1.20	0.035	0.047

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