

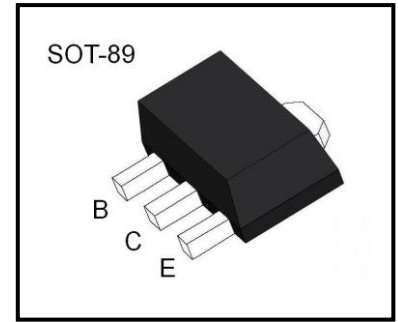
Application

- Low frequency amplifier, driver

Features

- Low $V_{CE(sat)}$: $V_{CE(sat)} = -350\text{mV}$, ($I_C/I_B = -500\text{mA}/-25\text{mA}$)
- Complement to 2SCR293P5T100-CN

Marking: ML



Absolute Maximum Rating (Ta=25°C)

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	°C
Storage Temperature	T_{stg}	-55~150	°C

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	$I_C = -10\mu\text{A}$, $I_E = 0$	-30			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = -1\text{mA}$, $I_B = 0$	-30			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = -10\mu\text{A}$, $I_C = 0$	-6			V
Collector -base cut-off current	I_{CBO}	$V_{CB} = -30\text{V}$, $I_E = 0$			-100	nA
Emitter- base cut-off current	I_{EBO}	$V_{EB} = -6\text{V}$, $I_C = 0$			-100	nA
DC current gain	h_{FE}	$V_{CE} = -2\text{V}$, $I_C = -100\text{mA}$	270		680	
Collector-emitter saturation voltage*	$V_{CE(sat)}$	$I_C = -500\text{mA}$, $I_B = -25\text{mA}$		-150	-350	mV
Transition frequency *	f_T	$V_{CE} = -2\text{V}$, $I_E = -100\text{mA}$		320		MHz
Output capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $f = 1\text{MHz}$		7		pF
Turn on time	t_{on}	$I_C = -500\text{mA}$, $I_{B1} = -25\text{mA}$ $I_{B2} = 25\text{mA}$, $V_{CC} = -5\text{V}$ $R_L = 10\Omega$		60		ns
Storage time	t_s			160		ns
Fall time	t_f			50		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

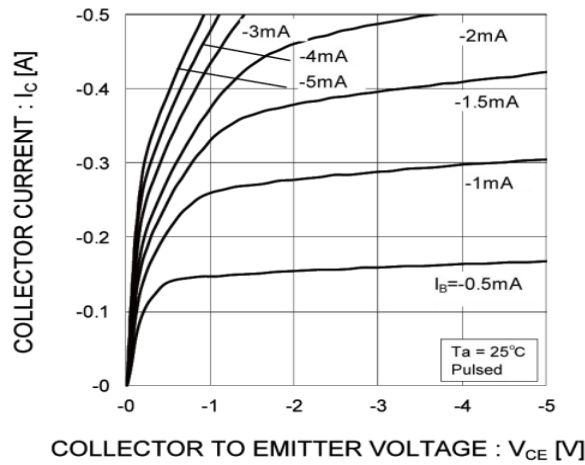


Figure 1. Static Characteristic

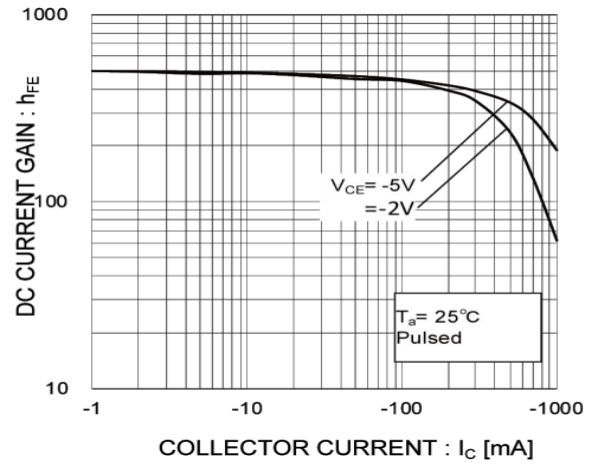


Figure 2. DC current Gain

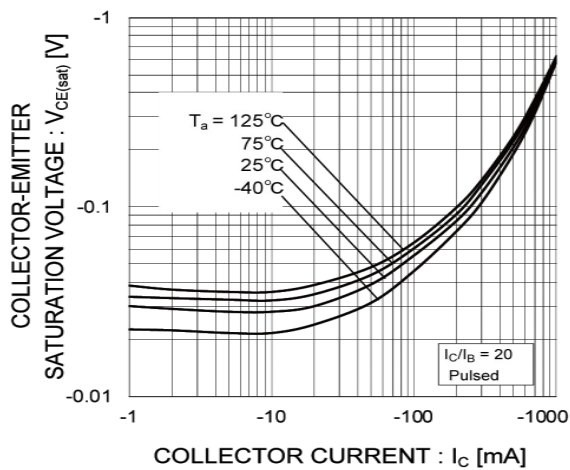


Figure 3. Collector-Emitter Saturation Voltage

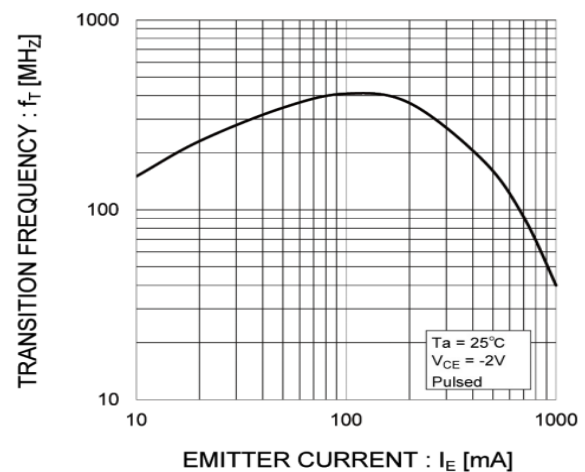


Figure 4. Current Gain Bandwidth Product

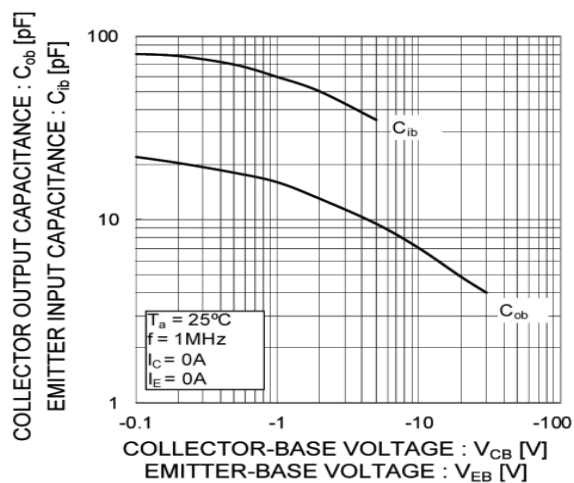


Figure 5. Collector Output Capacitance

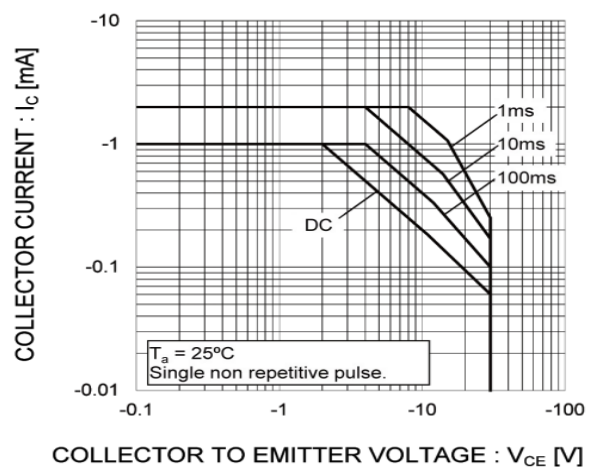


Figure 6. Safe Operating Area

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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