

TRANSISTOR(NPN)

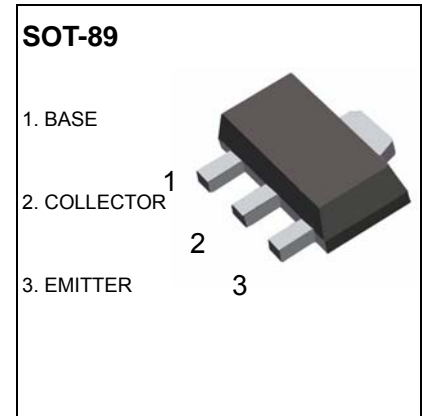
FEATURES

- Compliment to PXT3906
- Low current
- Low voltage

MARKING: 1A

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CB0}	Collector-Base Voltage	60	V
V_{CE0}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	0.2	A
P_C	Collector Power Dissipation	0.5	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55-150	$^\circ\text{C}$



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=30\text{V}, I_E=0$			0.05	μA
cut-off current	I_{EBO}	$V_{EB}=6\text{V}, I_C=0$			0.05	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=1\text{V}, I_C=0.1\text{mA}$	60			
	$h_{FE(2)}$	$V_{CE}=1\text{V}, I_C=1\text{mA}$	80			
	$h_{FE(3)}$	$V_{CE}=1\text{V}, I_C=10\text{mA}$	100		300	
	$h_{FE(4)}$	$V_{CE}=1\text{V}, I_C=50\text{mA}$	60			
	$h_{FE(5)}$	$V_{CE}=1\text{V}, I_C=100\text{mA}$	30			
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.2	V
	$V_{CE(sat)2}$	$I_C=50\text{mA}, I_B=5\text{mA}$			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)1}$	$I_C=10\text{mA}, I_B=1\text{mA}$	0.65		0.85	V
	$V_{BE(sat)2}$	$I_C=50\text{mA}, I_B=5\text{mA}$			0.95	V
Transition frequency	f_T	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	300			MHz
Collector capacitance	C_c	$V_{CB}=5\text{V}, I_E=0, f=1\text{MHz}$			4	pF
Emitter capacitance	C_e	$V_{EB}=0.5\text{V}, I_C=0, f=1\text{MHz}$			8	pF
Noise figure	NF	$V_{CE}=5\text{V}, I_C=0.1\text{mA}, f=10\text{Hz}-15.7\text{kHz}, R_S=1\text{K}\Omega$			5	dB
Delay time	t_d	$I_C=10\text{mA}, I_{B1}=-I_{B2}=1\text{mA}$			35	nS
Rise time	t_r				35	nS
Storage time	t_s				200	nS
Fall time	t_f				50	nS

Typical characteristics

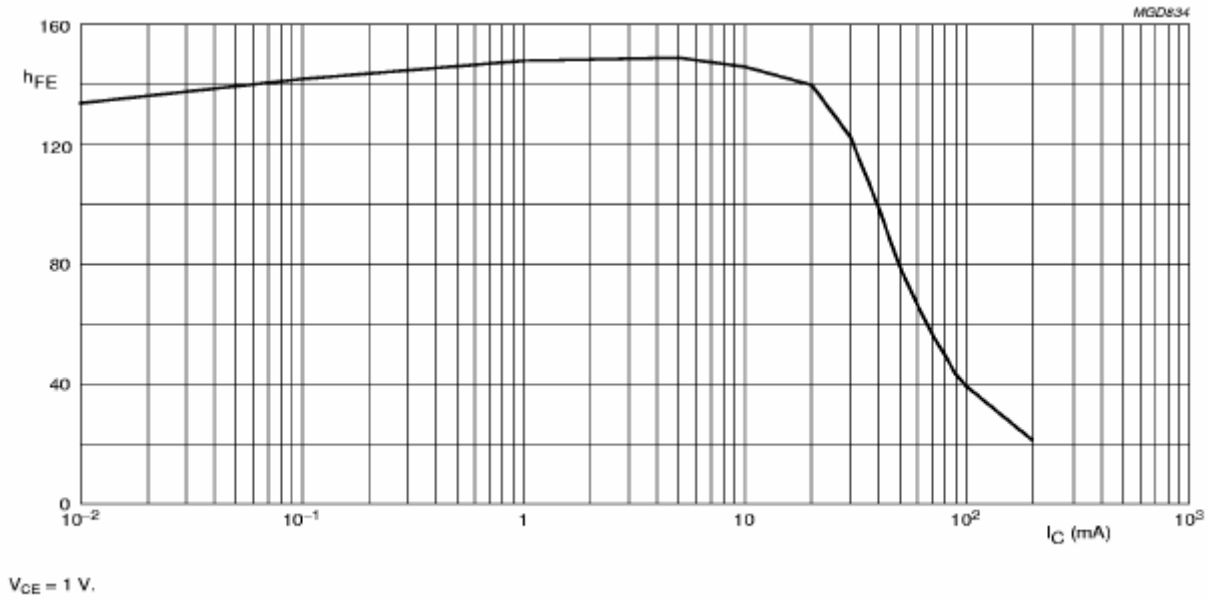


Fig.2 DC current gain; typical values.