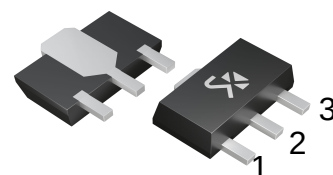


NPN Silicon Epitaxial Planar Transistor

SOT-89

Features

- Epitaxial planar die construction
- Complementary PNP Type available(PXT2907A)



MARKING: 1P

1base 2collector 3emitter

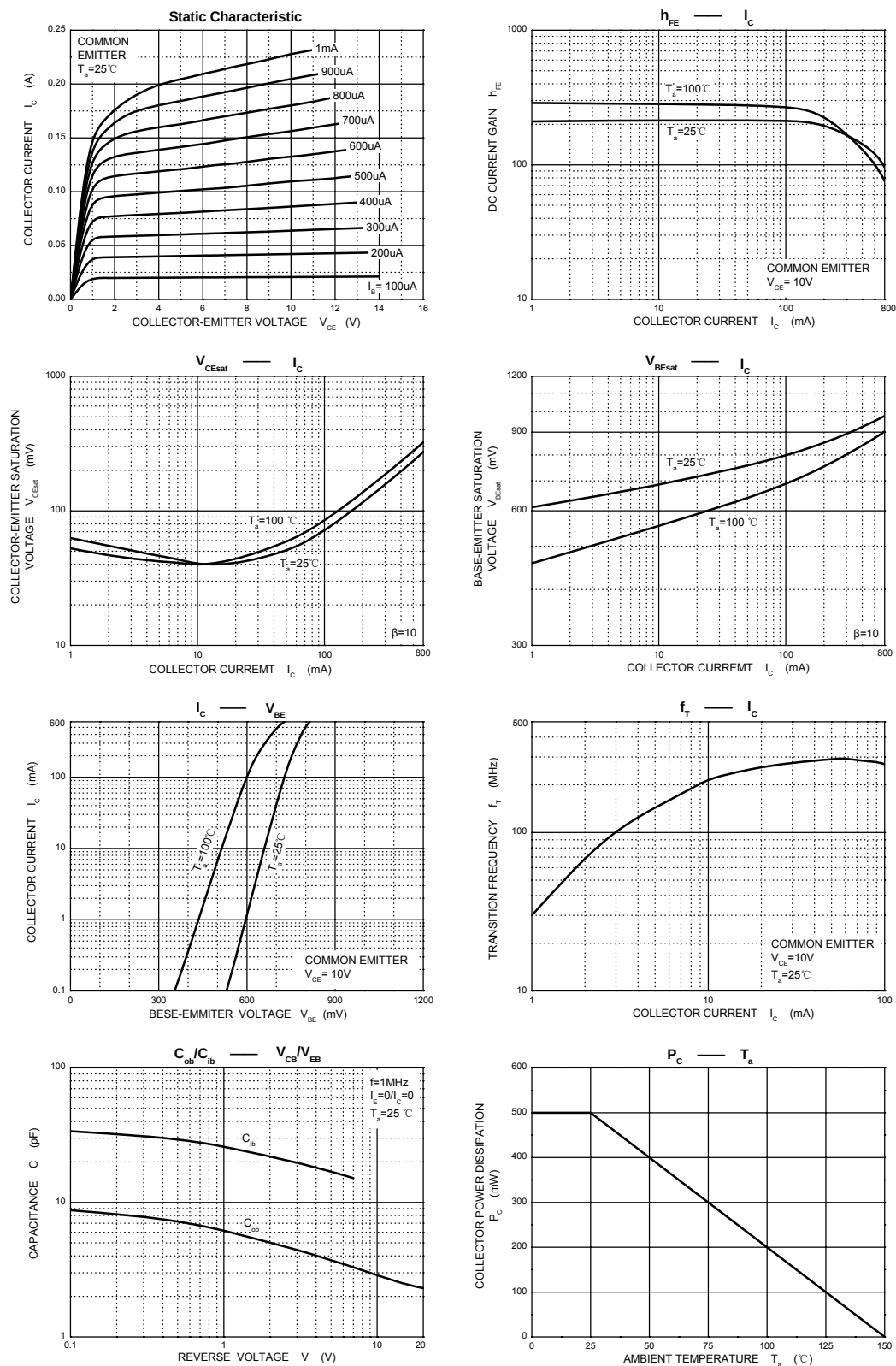
MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	75	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	800	mA
P_C	Collector Power Dissipation	0.5	W
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$

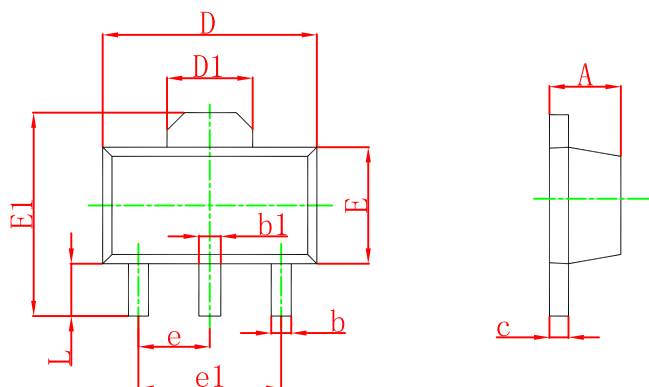
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	75			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	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}	$V_{CB}=60\text{V}, I_E=0$			0.01	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			0.01	μA
DC current gain	h_{FE}	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$ $V_{CE}=10\text{V}, I_C=1\text{mA}$ $V_{CE}=10\text{V}, I_C=10\text{mA}$ $V_{CE}=10\text{V}, I_C=150\text{mA}$ $V_{CE}=1\text{V}, I_C=150\text{mA}$ $V_{CE}=10\text{V}, I_C=500\text{mA}$	35 50 75 100 50 40		300	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			1.0	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}$			0.3	V
Collector-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			2.0	V
Collector-emitter saturation voltage	$V_{BE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	0.6		1.2	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_E=20\text{mA}, f=100\text{MHz}$	300			MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			8	pF
Delay time	t_d	$V_{CC}=30\text{V}, I_C=150\text{mA}$			10	ns
Rise time	t_r	$V_{BE(off)}=0.5\text{V}, I_{B1}=15\text{mA}$			25	ns
Storage time	t_s	$V_{CC}=30\text{V}, I_C=150\text{mA}$			225	ns
Fall time	t_f	$I_{B1}=-I_{B2}=15\text{mA}$			60	ns

Typical Characteristics

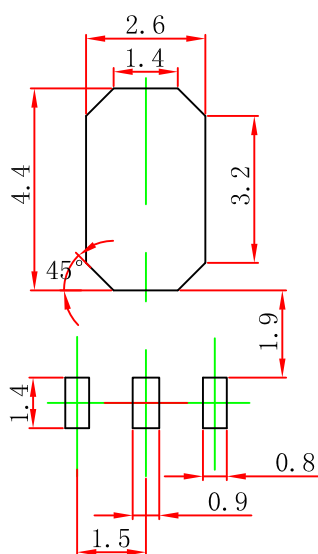


SOT-89 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

SOT-89 Suggested Pad Layout



Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.