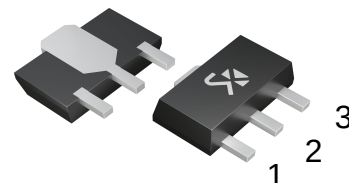


NPN Silicon Epitaxial Planar Transistor

SOT-89



1base 2collector 3emitter

FEATURES

- High voltage: $V_{CEO}=160V$
- Large continuous collector current capability

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current - DC	1.0	A
P_C	Collector Power Dissipation	0.5	W
T_j	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature	-55-150	$^{\circ}C$

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

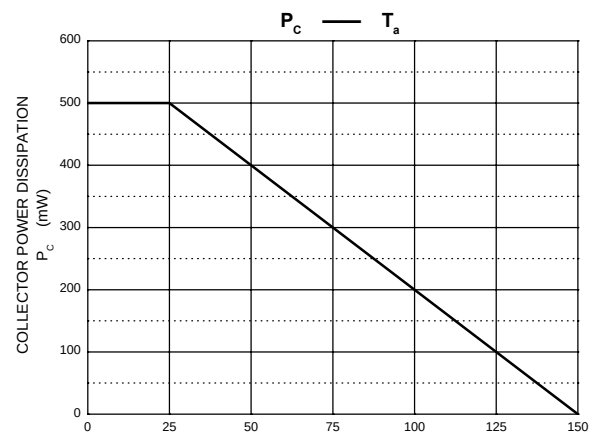
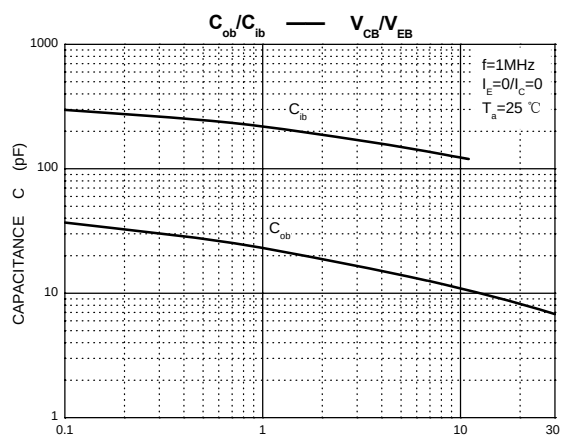
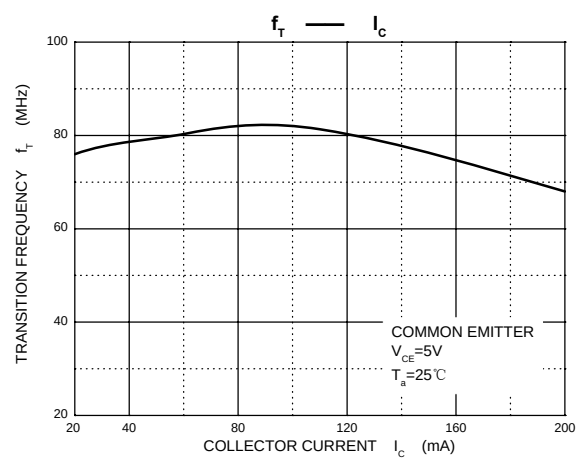
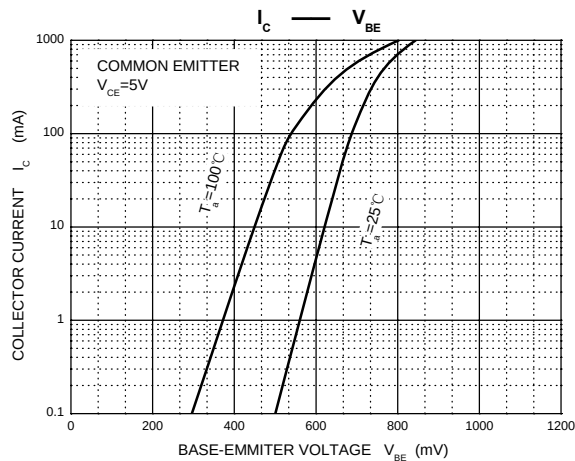
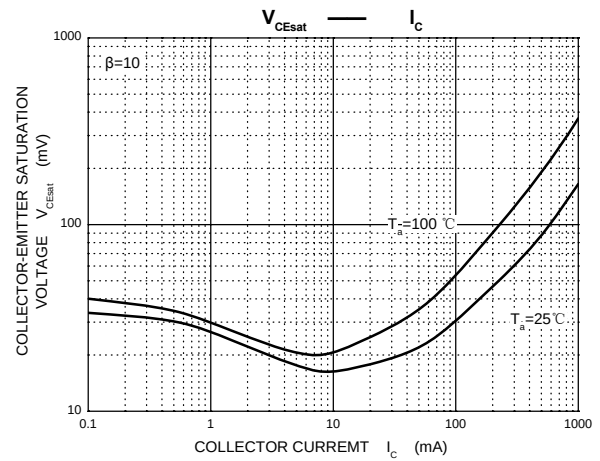
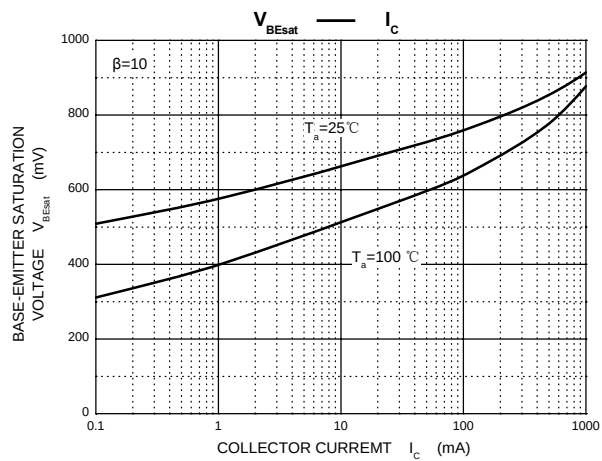
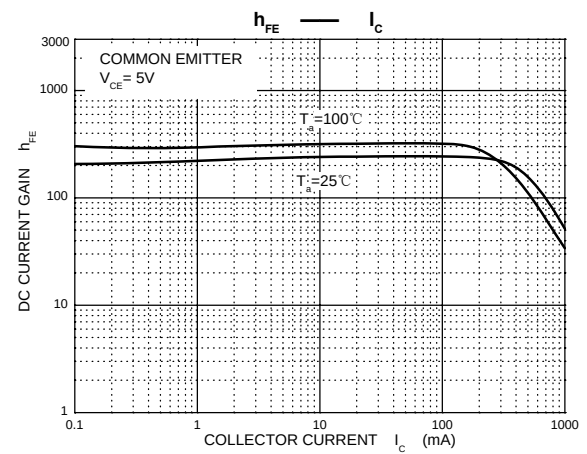
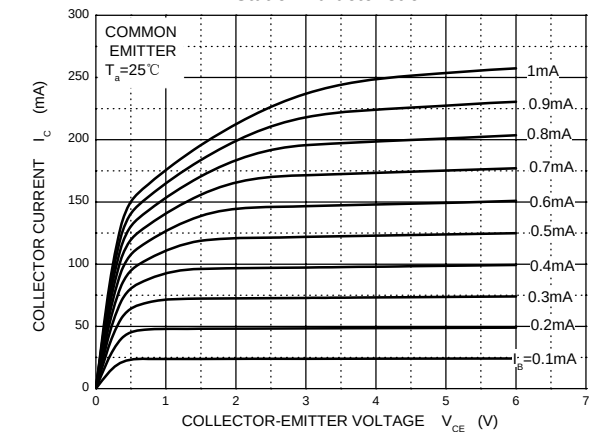
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	160			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=150V, I_E=0$			1	μA
Collector cut-off current	I_{EBO}	$V_{EB}=6V, I_C=0$			1	μA
DC current gain	h_{FE}	$V_{CE}=5V, I_C=200mA$	100		320	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			1	V
Transition frequency	f_T	$V_{CE}=5V, I_E=200mA$	20			MHz
output capacitance	C_{Ob}	$V_{CE}=10V, I_E=0mA, f=1.0MHz$			20	pF

CLASSIFICATION OF h_{FE}

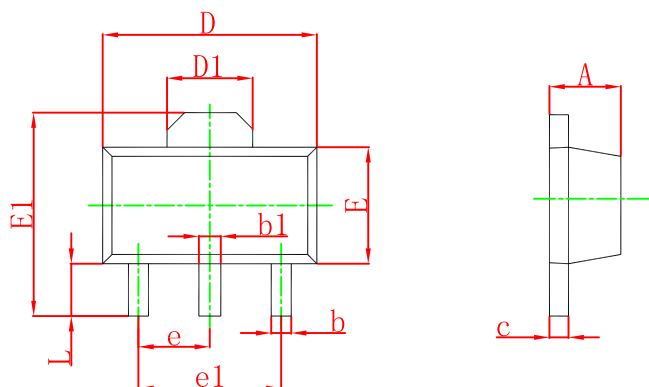
Rank	O	Y
Range	100-200	160-320

Typical Characteristics

Static Characteristic

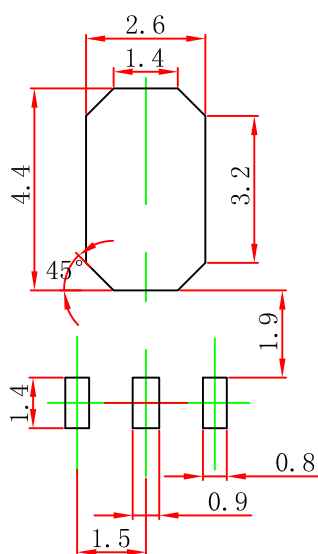


SOT-89 Package Outline Dimensions



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.