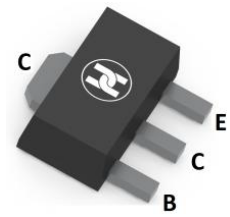


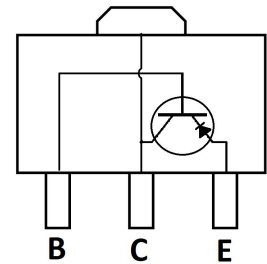
BIPOLAR TRANSISTOR (PNP)

FEATURES

- Complementary to BCX54/BCX55/BCX/56
- High current and Low Voltage
- For Medium Power General Purpose
- For Drive Stages of Audio Amplifiers
- Surface Mount device



SOT-89



MECHANICAL DATA

- Case: SOT-89
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.055 grams (approximate)

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

Parameter		Symbol	Value	Unit
Collector-Base Voltage	BCX51	V_{CBO}	-45	V
	BCX52		-60	
	BCX53		-100	
Collector-Emitter Voltage	BCX51	V_{CEO}	-45	V
	BCX52		-60	
	BCX53		-80	
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current		I_C	-1	A
Collector Power Dissipation		P_C	500	mW
Thermal Resistance From Junction To Ambient		$R_{\theta JA}$	250	$^\circ\text{C/W}$
Junction Temperature		T_J	150	$^\circ\text{C}$
Storage Temperature		T_{STG}	-55 ~ +150	$^\circ\text{C}$

BIPOLAR TRANSISTOR (PNP)
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions	
Collector-base breakdown voltage	$V_{(BR)CBO}$	-45			V	BCX51	$I_C=-100\mu A, I_E=0$
		-60			V	BCX52	
		-100			V	BCX53	
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	-45			V	BCX51	$I_C=-10mA, I_B=0$
		-60			V	BCX52	
		-80			V	BCX53	
Emitter-base breakdown voltage	$V_{(BR)EBO}$	-5			V	$I_E=-100\mu A, I_C=0$	
Collector cut-off current	I_{CBO}			-0.1	μA	$V_{CB}=-30V, I_E=0$	
Emitter cut-off current	I_{EBO}			-0.1	μA	$V_{EB}=-5V, I_C=0$	
DC current gain	h_{FE1}	63				$V_{CE}=-2V, I_C=-5mA$	
	h_{FE2}	63		250		$V_{CE}=-2V, I_C=-150mA$	
	h_{FE3}	40				$V_{CE}=-2V, I_C=-500mA$	
Collector-emitter saturation voltage	$V_{CE(sat)}$			-0.5	V	$I_C=-500mA, I_B=-50mA$	
Base-emitter voltage	V_{BE}			-1	V	$V_{CE}=-2V, I_C=-500mA$	
Transition frequency	f_T		50		MHz	$V_{CE}=-5V, I_C=-10mA, f=100MHz$	

CLASSIFICATION OF h_{FE}

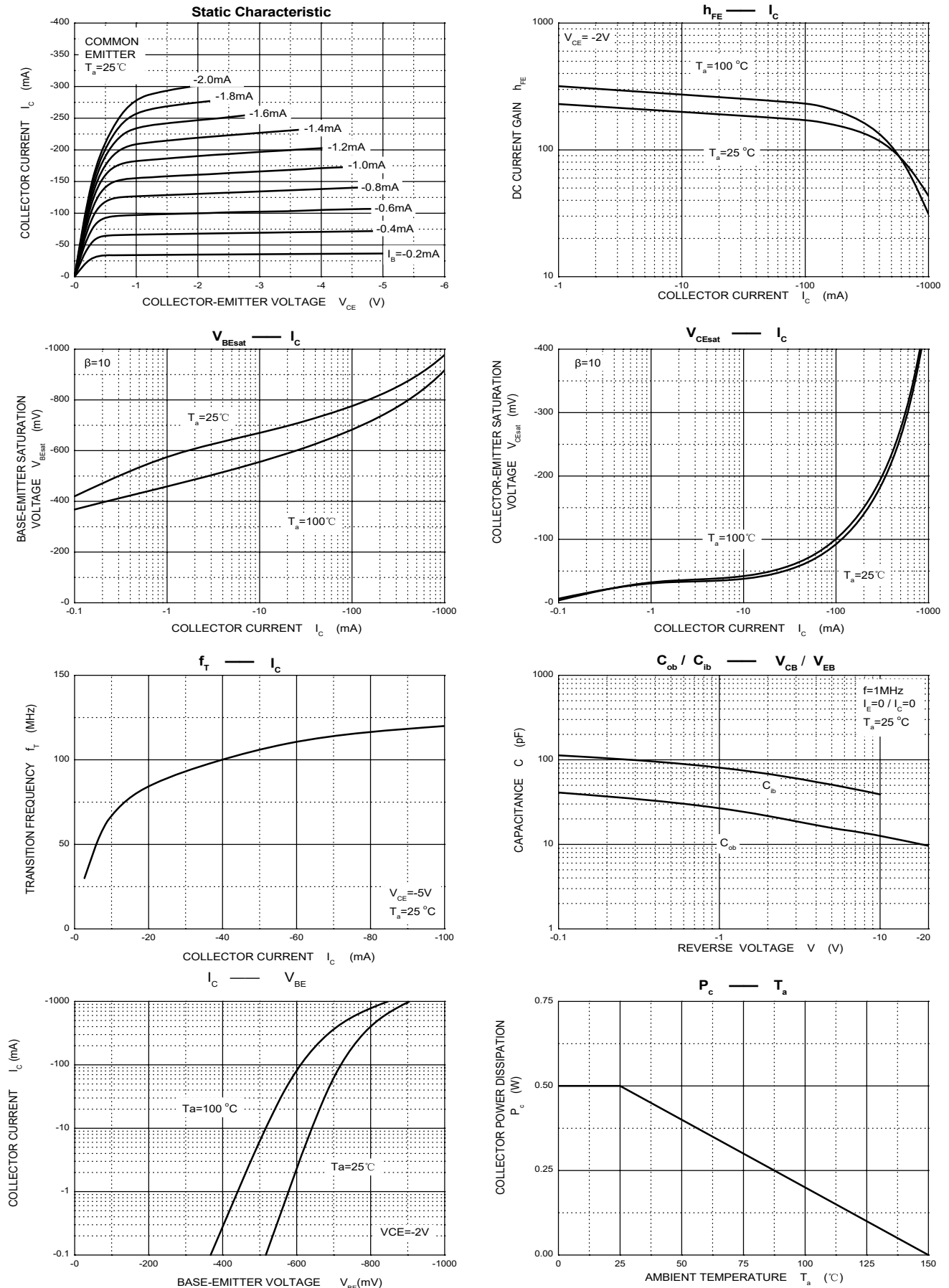
Rank	BCX51	BCX51-10	BCX51-16
Range	63-250	63-160	100-250
Marking	AA	AC	AD

Rank	BCX52	BCX52-10	BCX52-16
Range	63-250	63-160	100-250
Marking	AE	AG	AM

Rank	BCX53	BCX53-10	BCX53-16
Range	63-250	63-160	100-250
Marking	AH	AK	AL

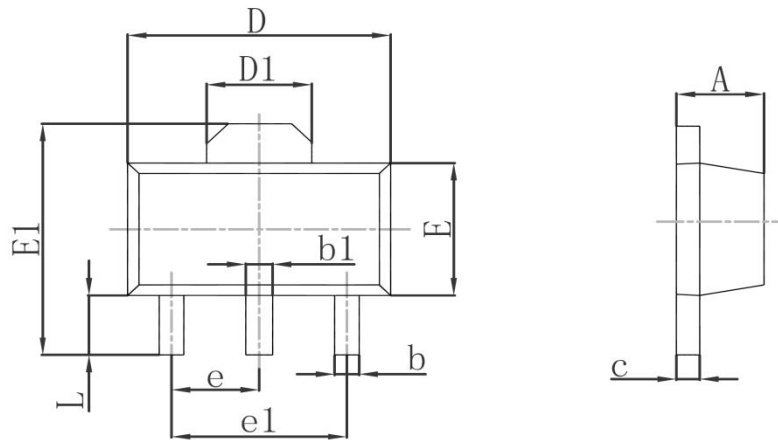
BIPOLAR TRANSISTOR (PNP)

Typical Characteristics



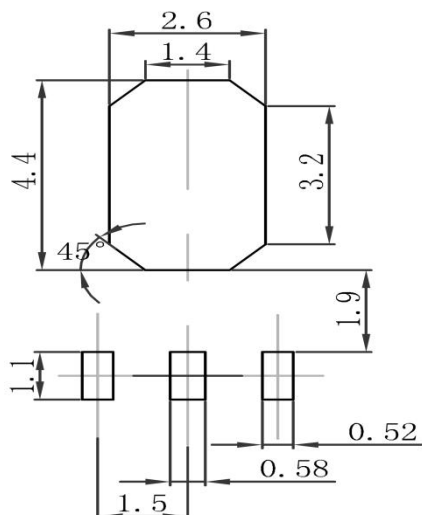
BIPOLAR TRANSISTOR (PNP)

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	1.550REF		0.061REF	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500TYP		0.060TYP	
e1	3.000TYP		0.118TYP	
L	0.900	1.200	0.035	0.047

SOT-89 Suggested Pad Layout



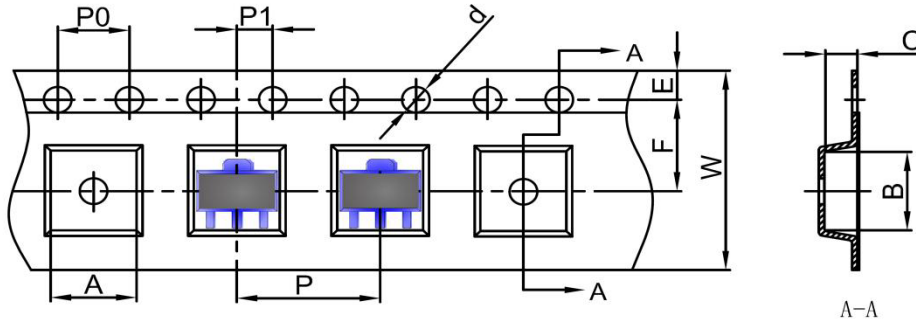
Note:

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

BIPOLAR TRANSISTOR (PNP)

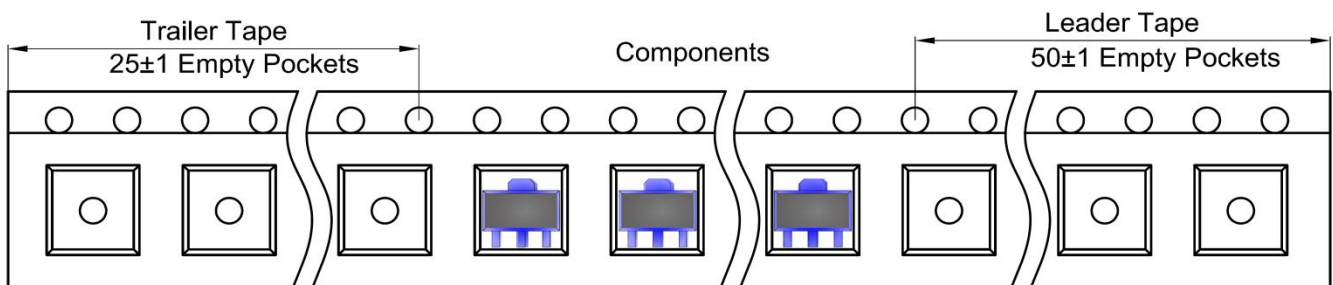
SOT-89 Tape and Reel

SOT-89 Embossed Carrier Tape

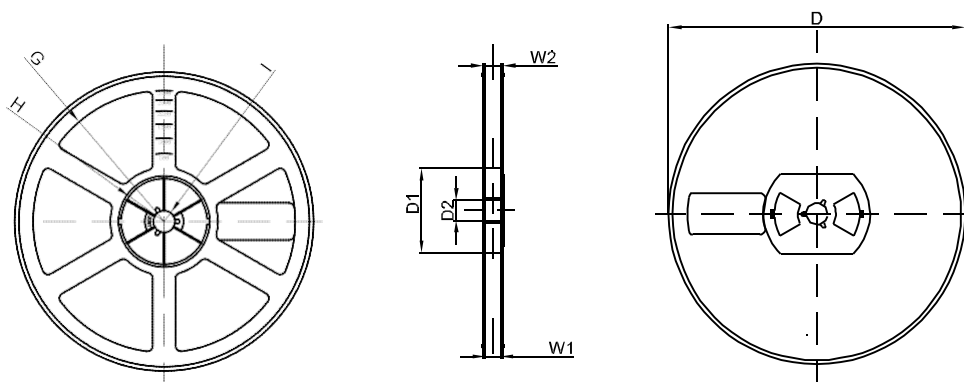


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOT-89	4.85	4.45	1.85	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SOT-89 Tape Leader and Trailer



SOT-89 Reel



DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	13.20	16.50
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1