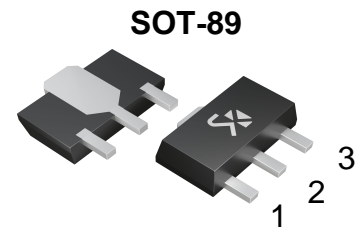


NPN Silicon Epitaxial Planar Transistor

FEATURES

- High current : 1A
- Low voltage (maximum) 45 V



MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

1base 2collector 3emitter

Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage	45	V
V _{CEO}	Collector-Emitter Voltage	45	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	1.0	A
I _{CM}	Peak current of collector	1.5	A
I _{BM}	Base peak current	0.2	A
P _D	Power consumption Ta<25 °C*	1.3	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-65-150	°C
R _{amb}	Operating Ambient Temperature	-65-150	°C
R _{th (j-a)}	Thermal resistance from junction to environment*	94	K/W
R _{th (j-s)}	Thermal resistance from junction to solder joint	14	K/W

*The equipment is installed on a printed circuit board, with single-sided copper, tin plating, and a collector mounting pad of 6 square centimeters.

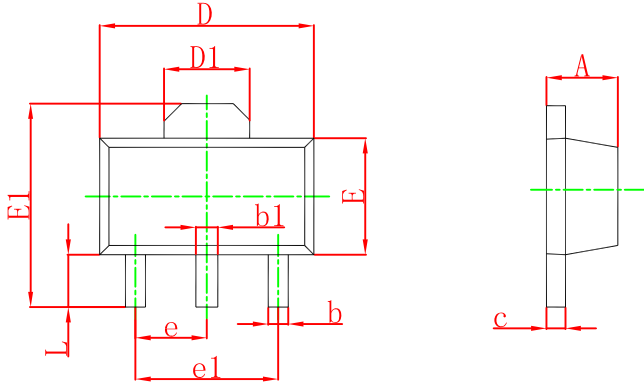
ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector cut-off current	I _{CBO}	V _{CB} =30V, I _E =0			100	nA
		V _{CB} =30V, I _E =0, T _J =125°C			10	μA
Collector cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			100	nA
DC current gain	h _{FE}	V _{CE} =2V, I _C =5mA	40		250	
		V _{CE} =2V, I _C =150mA	63			
		V _{CE} =2V, I _C =500mA	25			
		V _{CE} =2V, I _C =150mA	63		160	
		V _{CE} =2V, I _C =150mA	100		250	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =500mA, I _B =50mA			0.5	V
Base-emitter voltage	V _{BE}	V _{CE} =2V, I _C =500mA			1	V
Current gain ratio of complementary pairs	$\frac{h_{FE}}{h_{FE}}$	V _{CE} =2V, I _C =150mA		1.3	1.6	V
Transition frequency	f _T	V _{CE} =5V, I _E =10 mA, f _T =100MHz		130		MHz

CLASSIFICATION OF h_{FE}

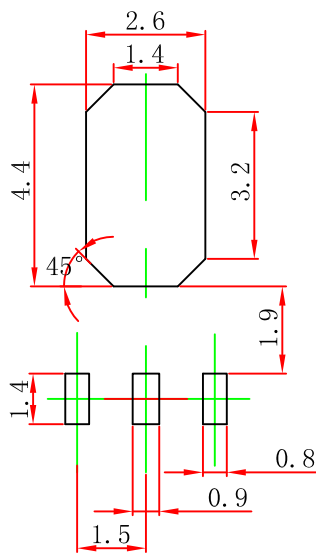
Rank	BCX54	BCX54-10	BCX54-16
Marking	BA	BC	BD

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: ± 0.05 mm.
3. The pad layout is for reference purposes only.