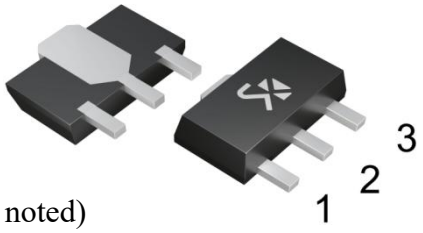
BCX55

NPN Silicon Epitaxial Planar Transistor

SOT-89



Features

- Use epoxy resin solid encapsulation
- Small in size and light in weight

Absolute Maximum Ratings (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current -Continuous	I_C	1.0	A
Peak Current of Collector	I_{CM}	1.5	A
Base Peak Current	I_{BM}	0.2	A
Total Power Dissipation	P_{tot}	1	W
Thermal Resistance From Junction to Environment	$R_{th(j-a)}$	125	℃/W
Operation Junction and Storage Temperature	T_J,T_{STG}	-55~+150	℃

Note: 1.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 (Ta=25℃, unless otherwise specified)

Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage		$V_{(BR)CBO}$	I_C=100μA,I_E=0	60			V
Collector-emitter breakdown voltage		$V_{(BR)CEO}$	I_C=1mA,I_B=0	60			V
Emitter-base breakdown voltage		$V_{(BR)EBO}$	I_E=100μA,I_C=0	5			V
DC current gain		h_{FE}	V_{CE}=2V,I_C=150mA	40		250	
	BCX55-10			63		160	
	BCX55-16			100		250	
Collector cut-off current		I_{CBO}	V_{CB}=30V,I_E=0			0.1	μA
Emitter cut-off current		I_{EBO}	V_{EB}=5V,I_C=0			0.1	μA
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C=500mA,I_B=50mA			0.5	mV
Transition frequency		f_T	V_{CE}=5V,I_C=10mA,f=100MHz		130		MHz

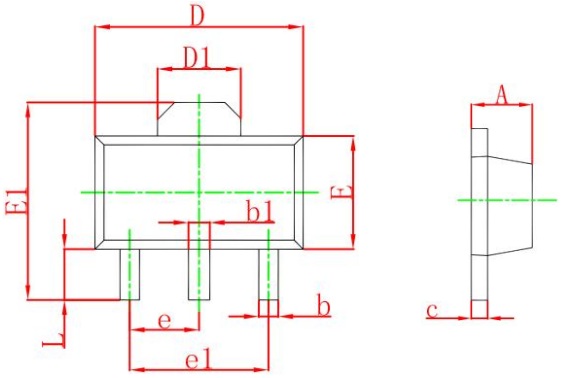
Classification OF h_{FE}

Rank	BCX55	BCX55-10	BCX55-16
Marking	BE	BG	BM

Package Information

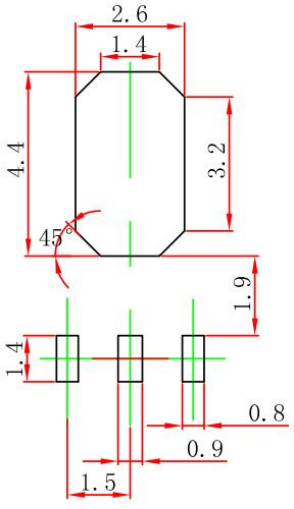
SOT-89

Dimensions in mm



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	43400	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

Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters
2.General tolerance:±0.05mm
3.The pad layout is for reference purpose only

Shikues Disclaimer

1.Accuracy of Information and Right to Modify

The information provided in this document is for reference only. Shikues reserves the right to make changes to this document and to the specifications of the products described herein at any time, without prior notice, for the purpose of improving reliability, function, design, or for any other reason. It is the customer's responsibility to obtain and verify the latest product information and specifications before making any final design, procurement, or usage decisions.

2.No Warranty

Shikues makes no express or implied warranties, representations, or guarantees regarding the suitability of its products for any particular purpose.

Shikues assumes no liability for any assistance provided or for the design of customer products. All products are supplied "as is."

3.Intended Use and Limitation of Liability

The products described in this document are intended for use in general-purpose electronic devices. They are neither designed nor tested nor authorized for use in transportation equipment or applications requiring high reliability. Unless expressly authorized in writing by Shikues, these products must not be used as critical components in life-support systems or any applications where failure could directly pose a risk to human life (including, but not limited to, medical devices, transportation systems, aerospace equipment, nuclear facilities, and safety-critical systems).

Shikues assumes no responsibility or liability for any consequences arising from the use of its products in unauthorized or unintended applications.

Neither Shikues nor its representatives shall be held liable for any resulting damages.

4.Intellectual Property

This document does not grant any express or implied license—whether by estoppel, implication, or otherwise—to use any intellectual property rights of Shikues.