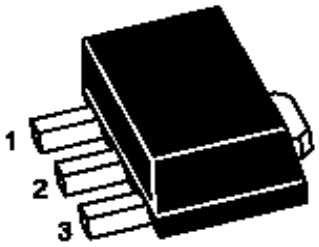
NPN SILICON EPITAXIAL PLANAR TRANSISTOR

BCX54.16



1.Base 2.Collector 3.Emitter

SOT-89
Surface Mount
Plastic Package

PNP Complements to BCX51

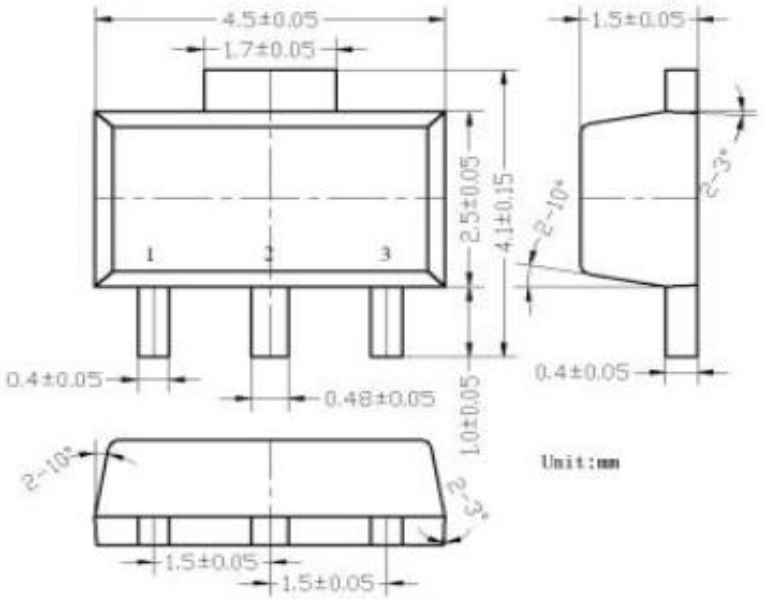
ABSOLUTE MAXIMUM RATINGS (T_a=25ºC)

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Base Voltage	V_{CBO}	45	V
Collector Emitter Voltage	V_{CEO}	45	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current Continuous	I_C	1	A
Collector Power Dissipation	P_C	500	mW
Thermal Resistance from Junction to Ambient	R_{thJA}	250	°C/W
Junction Temperature	T_j	150	ºC
Storage Temperature Range	T_{stg}	- 55 to +150	ºC

ELECTRICAL CHARACTERISTICS (T_C=25ºC unless specified otherwise)

DESCRIPTION		SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=10mA, I_B=0	45			V
Collector Base Breakdown Voltage		$V_{(BR)CBO}$	I_C=100µA, I_E=0	45			V
Emitter Base Breakdown Voltage		$V_{(BR)EBO}$	I_E=100µA, I_C=0	5			V
Collector Base Cut Off Current		I_{CBO}	V_{CB}=30V			100	nA
Emitter Base Cut Off Current		I_{EBO}	V_{EB}=5V			100	nA
DC Current Gain	BCX54.16	h_{FE}	I_C=5mA, V_{CE}=2V	25			
			I_C=150mA, V_{CE}=2V	100		250	
			I_C=500mA, V_{CE}=2V	25			
Collector Emitter Saturation Voltage		$V_{CE\ (Sat)}$	I_C=500mA, I_B=50mA			0.5	V
Base Emitter On Voltage		$V_{BE\ (on)}$	I_C=500mA, V_{CE}=2V			1	V
Transition Frequency		f_T	V_{CE}=5V, I_C=10mA, f=100MHz		130		MHz

SOT-89 PACKAGE DIMENSION



1 . BASE

2. COLLECTOR

3. EMITTER

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.

2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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