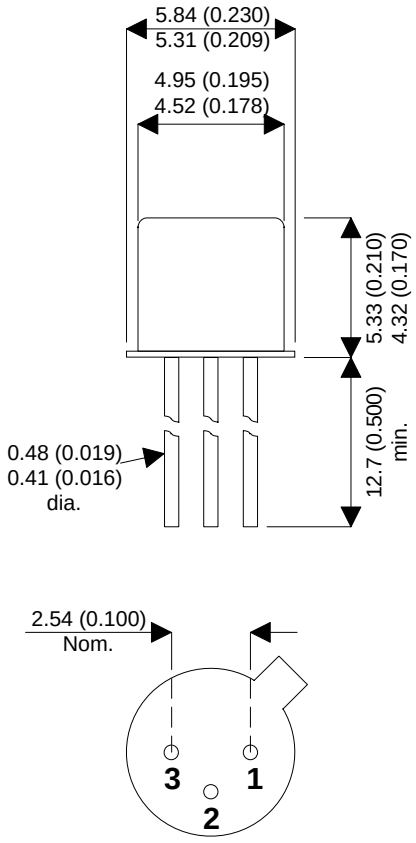
BCY56

MECHANICAL DATA
Dimensions in mm (inches)



TO-18 (TO-206AA)

Underside View

Pin 1 – Emitter PAD 2 – Base PAD 3 – Collector

GENERAL PURPOSE, LOW POWER, NPN SWITCHING TRANSISTOR

FEATURES

- **SILICON PLANAR EPITAXIAL NPN TRANSISTOR**
- **CECC SCREENING OPTIONS**
- **SPACE QUALITY LEVELS OPTIONS**
- **JAN LEVEL SCREENING OPTIONS**
- **LOW NOISE**

APPLICATIONS:

Intended for general purpose very high gain low level and low noise applications. The BCY56 is also suitable for low speed switching applications.

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_{CBO}	Collector - Base Voltage (I_E =0)	45V
V_{CEO}	Collector - Emitter Voltage (I_B =0)	45V
I_C	Collector Current	100mA
P_{TOT}	Total Power Dissipation T_{amb} < 25°C	300mW
T_J, T_{STG}	Maximum Junction And Storage Temperature	-65°C to 175°C
R_{JC}	Thermal Resistance Junction to Case	200°C/mW
R_{JA}	Thermal Resistance Junction to Ambient	500°C/mW

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ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_E=0	I_C=10µA	45			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_B=0	I_C=10mA	45			
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_C=0	I_E=10µA	5			
I_{CBO}	Collector Cut-off Current	I_E=0	V_{CB}=20V			100	nA
I_{EBO}	Emitter Cut-off Current	I_C=0	V_{EB}=5V			100	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C=2mA	V_{CE}=5V	600	650	700	mV
$V_{CE(sat)}$	Base-Emitter Saturation Voltage	I_C=10mA	I_B=1mA		80		
		I_C=100mA	I_B=10mA		200		
h_{FE}	DC Current Gain	I_C=10µA	V_{CE}=5V	40			—
		I_C=2mA	V_{CE}=5V	100	200	450	
		I_C=10mA	V_{CE}=5V	100			
f_T	Transition Frequency	I_C=0.5mA	V_{CE}=5V		85		MHz
		I_C=10mA	V_{CE}=5V		250		
C_{CBO}	Collector Capacitance	I_E=0 f=1kHz	V_{CB}=5V		4.5		pF
NF	Noise Figure	I_C=200µA R_S=2K	V_{CE}=5V f=15kHz		1.5	5	dB

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