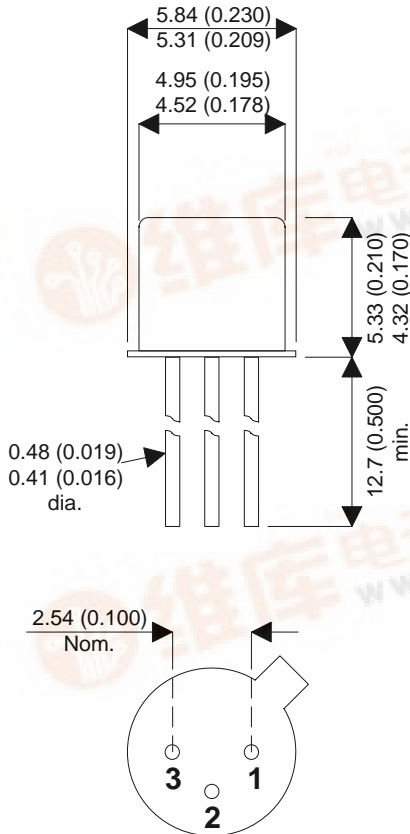




BCY56

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

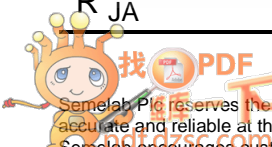
- SILICON PLANAR EPITAXIAL NPN TRANSISTOR
- CECC SCREENING OPTIONS
- SPACE QUALITY LEVELS OPTIONS
- JAN LEVEL SCREENING OPTIONS
- LOW NOISE

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 ($T_{case} = 25^{\circ}C$ 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 $T_{amb} < 25^{\circ}C$	300mW
T_J, T_{STG}	Maximum Junction And Storage Temperature	-65 $^{\circ}C$ to 175 $^{\circ}C$
R_{JC}	Thermal Resistance Junction to Case	200 $^{\circ}C/mW$
R_{JA}	Thermal Resistance Junction to Ambient	500 $^{\circ}C/mW$



ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_E=0$	$I_C=10\mu A$	45			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_B=0$	$I_C=10mA$	45			
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_C=0$	$I_E=10\mu A$	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	$I_C=10\mu A$	$V_{CE}=5V$	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	$I_E=0$	$V_{CB}=5V$		4.5		pF
		$f=1kHz$					
NF	Noise Figure	$I_C=200\mu A$	$V_{CE}=5V$		1.5	5	dB
		$R_S=2K$	$f=15kHz$				