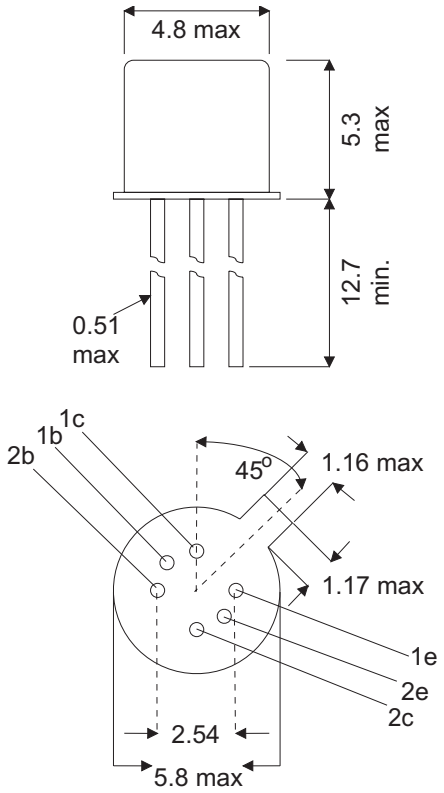
BCY87

MECHANICAL DATA
Dimensions in mm



TO71 PACKAGE

NPN SILICON PLANAR DUAL TRANSISTORS

DESCRIPTION

Matched dual NPN transistors in a TO-71 isolated metal package

APPLICATIONS

- **Differential Amplifier**
- **General purpose applications.**

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

V_{CBO}	Collector – Base Voltage	45V
V_{CEO}	Collector – Emitter Voltage	40V
P_{TOT}	Total Power Dissipation	150mW
T_J	Junction Temperature	175°C

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

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

	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-Off Current	V_{CB} = 20V	I_E = 0			10	nA
h_{FE}	DC Current Gain	I_C = 50µA	V_{CE} = 10V	100		450	—
		I_C = 10mA	V_{CE} = 10V	100		600	
f_T	Transistion Frequency	$-I_E$ = 50µA	V_{CB} = 10V	10			MHz
		$-I_E$ = 50µA	V_{CB} = 10V	50			
Cc	Collector-Capacitance at f = 1MHz	I_E = Ie = 0	V_{CB} = 10V			3.5	pF
NF	Noise Figure	I_C = 50µA f =10Hz to15Hz	V_{CE} = 5V R_S = 10kΩ			4	dB
		I_C = 50µA f =200Hz	V_{CE} = 5V R_S = Opt.			5	

MATCHING CHARACTERISTICS

	Parameter	Test Conditions	Unit
$\lvert I_{1C}/I_{2C}\rvert$	Ratio of Collector Currents $V_{1B-1E} = V_{2B-2E}$	$V_{1B-1E} = V_{2B-2E}$	0.67-1.5
$\lvert V_{1B-1E}-V_{2B-2E}\rvert$	Difference between Base-Emitter Voltages	$\lvert I_{1C} = I_{2C}\rvert$	10mV
$\lvert I_{1B}-I_{2B}\rvert$	Difference between Base Currents	$V_{1B-1E} = V_{2B-2E}$	300nA
h_{1FE}/h_{2FE}	D.C. Current Gain Ration	$\lvert I_{1C} = I_{2C}\rvert$	—

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