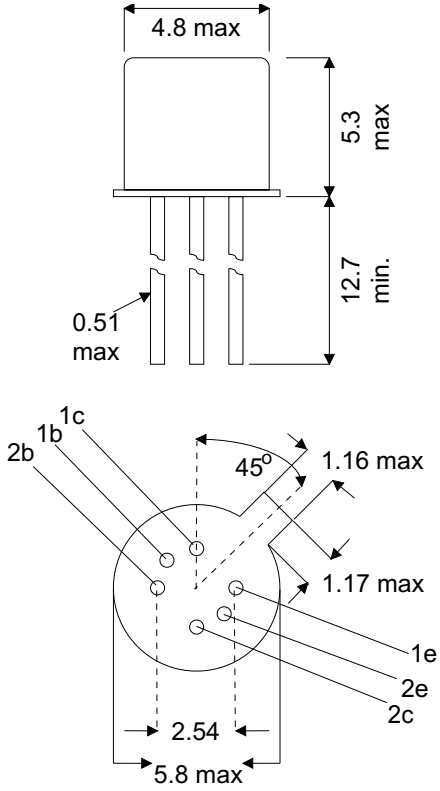
BCY89

MECHANICAL DATA
Dimensions in mm



TO71 PACKAGE

NPN SILICON PLANAR DUAL TRANSISTORS

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

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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_{CB} = 10V	100		450	—
		I_C = 10mA	V_{CB} = 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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