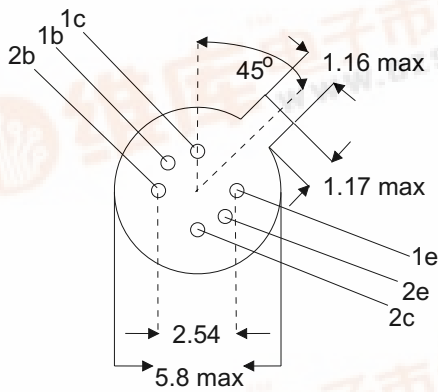
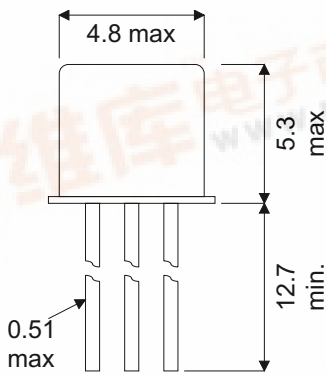




BCY89

MECHANICAL DATA

Dimensions in mm



TO71 PACKAGE

NPN SILICON PLANAR DUAL TRANSISTORS

APPLICATIONS

- Differential Amplifier
- General purpose applications.

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

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



ELECTRICAL CHARACTERISTICS ($T_{Case} = 25^{\circ}C$ 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	$I_C = 50\mu A$ $V_{CB} = 10V$	100		450	—
	$I_C = 10mA$ $V_{CB} = 10V$	100		600	
f_T Transistion Frequency	$-I_E = 50\mu A$ $V_{CB} = 10V$	10			MHz
	$-I_E = 50\mu A$ $V_{CB} = 10V$	50			
C_c Collector-Capacitance at $f = 1MHz$	$I_E = I_e = 0$ $V_{CB} = 10V$			3.5	pF
NF Noise Figure	$I_C = 50\mu A$ $V_{CE} = 5V$ $f = 10Hz$ to $15Hz$ $R_S = 10k\Omega$			4	dB
	$I_C = 50\mu A$ $V_{CE} = 5V$ $f = 200Hz$ $R_S = Opt.$			5	

MATCHING CHARACTERISTICS

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