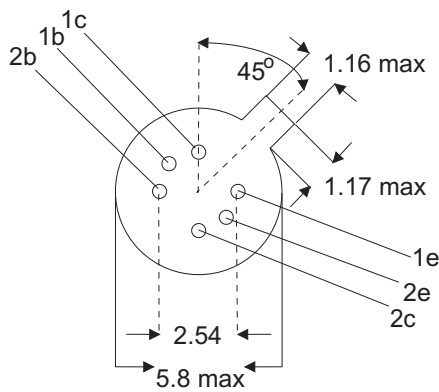
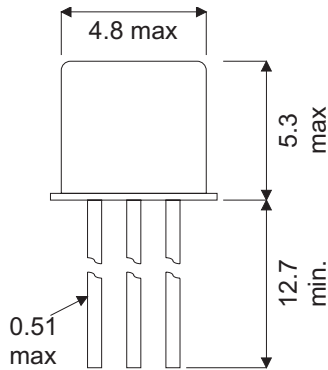


MECHANICAL DATA

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 ($T_{case} = 25^{\circ}C$ 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.

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	$I_C = 50\mu A$ $V_{CE} = 10V$	100		450	—
	$I_C = 10mA$ $V_{CE} = 10V$	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	$I_{1C} = I_{2C}$	—