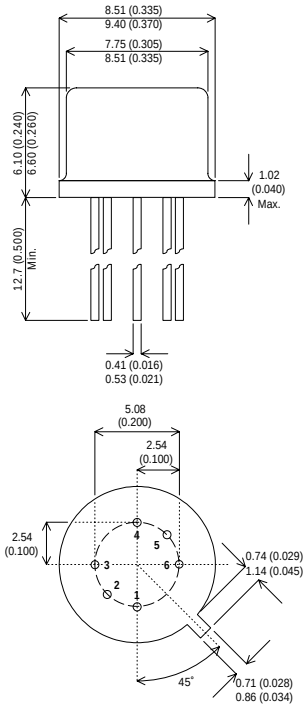
BFY84

MECHANICAL DATA
Dimensions in mm (inches)



TO77

Pin 1 – Collector 1	Pin 4 – Emitter 2
Pin 2 – Base 1	Pin 5 – Base 2
Pin 3 – Emitter 1	Pin 6 – Collector 2

SILICON PLANAR EPITAXIAL NPN TRANSISTOR

DESCRIPTION

The BFY84 is a six terminal device containing two isolated silicon planar epitaxial NPN transistors in Jedec TO77 metal case.

The good thermal tracking over a wide current and temperature range, offers the circuit designer matched transistors with specified performance for differential amplifiers.

ABSOLUTE MAXIMUM RATINGS

V_{CBO}	Collector – Base Voltage (I_E = 0)		30V
V_{CEO}	Collector – Emitter Voltage (I_B = 0)		12V
V_{EBO}	Emitter – Base Voltage (I_C = 0)		3V
I_C	Collector Current		200mA
P_{tot}	Total Dissipation at	$T_{amb} \leq 25°C$ (one side)	0.3W
		$T_{amb} \leq 25°C$ (both sides)	0.38W
		$T_{case} \leq 25°C$ (one side)	0.6W
		$T_{case} \leq 25°C$ (both sides)	0.98W
		$T_{case} \leq 100°C$ (one side)	0.34W
		$T_{case} \leq 100°C$ (both sides)	0.56W
T_{stg}, T_j	Storage and Junction Temperature		–65 to +200°C

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612.
E-mail: sales@semelab.co.uk Website: http://www.semelab.co.uk

BFY84

THERMAL DATA

			One side	Both Sides	
$R_{thj\text{-}case}$	Thermal Resistance Junction-case	Max	292	178	°C/W
$R_{thj\text{-}amb}$	Thermal Resistance Junction-ambient	Max	583	460	°C/W

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

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut Off Current	V_{CB} = 15V	I_E = 0			10	nA
		V_{CB} = 15V	T_{amb} =150°C			1	µA
$V_{(BR)CBO}$	Collector Base Breakdown Voltage	I_C = 1µA	I_E = 0	30			V
$V_{CEO(sus)}$*	Collector Emitter Sustaining Voltage	I_C = 3mA	I_B = 0	12			V
$V_{(BR)EBO}$	Emitter Base Breakdown Voltage	I_C = 0	I_E = 10µA	3			V
$V_{CE(sat)}$	Collector Emitter Saturation Voltage	I_C = 10mA	I_B = 1mA			0.4	V
$V_{BE(sat)}$	Base Emitter Saturation Voltage	I_C = 10mA	I_B = 1mA			1	V
$\lvert V_{BE1}\text{-}V_{BE2}\rvert$	Input Offset Voltage	I_C = 3mA	V_{CE} = 1V			15	mV
$\frac{\lvert V_{BE1}\text{-}V_{BE2}\rvert}{\triangle T}$	Input Offset Voltage Temperature Coefficient	I_C = 3mA	V_{CE} = 1V			25	µV/°C
h_{FE}	DC Current Gain	I_C = 3mA	V_{CE} = 1V	20			—
h_{FE1}/h_{FE2}	Matched Pair Ratio	I_C = 3mA	V_{CE} = 1V			1.25	
f_T	Transistion Frequency	I_C = 4mA f = 100MHz	V_{CE} = 10v	600			MHz
C_{EBO}	Emitter Base Capacitance	I_C = 0 f = 1MHz	V_{EB} = 0.5V			2	pF
C_{CBO}	Collector Base Capacitance	I_E = 0 f = 1MHz	V_{CB} = -10V			1.7	pF
NF	Noise Figure	I_C =1mA f = 60MHz	V_{CE} = 6V			6	dB

* Pulse test t_p = 300µs , Duty Cycle = 1%

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612.
E-mail: sales@semelab.co.uk Website: http://www.semelab.co.uk