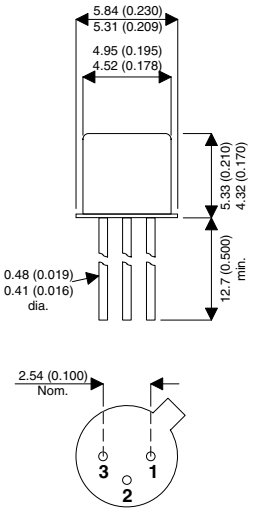
2N2484

NPN SILICON AMPLIFIER TRANSISTOR

MECHANICAL DATA
Dimensions in mm (inches)



TO18

FEATURES

- **SILICON PLANAR EPITAXIAL NPN TRANSISTOR**

PIN 1 = Emitter PIN 2 = Base PIN 3 = Collector

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise stated)

V_{CBO}	Collector – Base Voltage		60V
V_{CEO}	Collector – Emitter Voltage		60V
V_{EBO}	Emitter – Base Voltage		6V
I_C	Collector Current Continuous		50mA
P_D	Total Device Dissipation	@ T_A =25°C	360mW
		Derate above 25°C	2.06mW / °C
P_D	Total Device Dissipation	@ T_C =25°C	1.2W
		Derate above 25°C	6.85mW / °C
T_{STG} , T_J	Operating and Storage Temperature Range		–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

Document. 2359
Issue 1

SEME LAB

2N2484

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
OFF CHARACTERISTICS							
$V_{(BR)CBO*}$	Collector – Base Breakdown Voltage	I_C = 10μA	I_B = 0	60			V
$V_{(BR)CEO}$	Collector – Emitter Breakdown Voltage	I_C = 10mA	I_E = 0	60			
$V_{(BR)EBO}$	Emitter – Base Breakdown Voltage	I_E = 10μA	I_C = 0	6			
I_{CBO}	Collector Cut-off Current	V_{CB} = 45V	I_E = 0			10	nA
			TA = 150°C			10	μA
I_{EBO}	Emitter Cut-off Current	V_{BE} = 5V	I_C = 0			10	nA
ON CHARACTERISTICS							
$V_{CE(sat)}$	Collector – Emitter Saturation Voltage	I_C = 1mA	I_B = 0.1mA		0.25	0.35	V
$V_{BE(on)}$	Base – Emitter On Voltage	I_C = 0.1mA	V_{CE} = 5V	0.5	0.65	0.7	V
h_{FE}	DC Current Gain	I_C = 1μA	V_{CE} = 5V	30	190		—
		I_C = 10μA	V_{CE} = 5V	100	250	500	
			TA = 55°C	20	40		
		I_C = 100μA	V_{CE} = 5V	175	275		
		I_C = 500μA	V_{CE} = 5V	200	300		
		I_C = 1mA	V_{CE} = 5V	250	350		
		I_C = 10mA	V_{CE} = 5V		400	800	
SMALL SIGNAL CHARACTERISTICS							
f_T	Current Gain Bandwidth Product	I_C = 0.05mA f = 5MHz	V_{CE} = 5V	15	50		MHz
		I_C = 0.05mA f = 30MHz	V_{CE} = 5V	60	100		
C_{obo}	Output Capacitance	V_{CB} = 5V	I_E = 0		3	6	pF
C_{ibo}	Input Capacitance	f = 140KHz	I_C = 0.5mA		4	6	
h_{ie}	Input Impedance	I_C = 1.0mA f = 1.0KHz	V_{CE} = 5V	3.5		24	kΩ
h_{re}	Voltage Feedback Ratio					800	x 10^{-6}
h_{fe}	Small Signal Current Gain			150		900	—
h_{oe}	Small Signal Current Gain					40	μmhos

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

Document. 2359
Issue 1

SEME LAB

2N2484

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise stated)

Parameter		Test Conditions	Min.	Typ.	Max.	Unit
SMALL SIGNAL CHARACTERISTICS						
N_F	Noise Figure	I_C = 10μA V_{CE} = 5V RS = 10KΩ f = 100Hz BW = 20Hz		8.0	10	dB
		I_C = 10μA V_{CE} = 5V RS = 10KΩ f = 1.0kHz BW = 200Hz			3.0	
		I_C = 10μA V_{CE} = 5V RS = 10KΩ f = 10kHz BW = 2.0kHz			2.0	
		I_C = 10μA V_{CE} = 5V RS = 10KΩ f = 10Hz to 15.7kHz BW = 15.7kHz			3.0	

THERMAL CHARACTERISTICS

	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$R_{\theta JC}$	Thermal Resistance, Junction to Case				146	°C/W
$R_{\theta JA(1)}$	Thermal Resistance, Junction to Case				485	
T_L	Lead Temperature 1/16 from Case for 10 seconds				300	°C

* Pulse Test: $t_p \leq 300\mu s$, $\delta \leq 2\%$.

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

Document. 2359
Issue 1