FAIRCHILD SEMICONDUCTOR™

DISCRETE POWER & SIGNAL TECHNOLOGIES

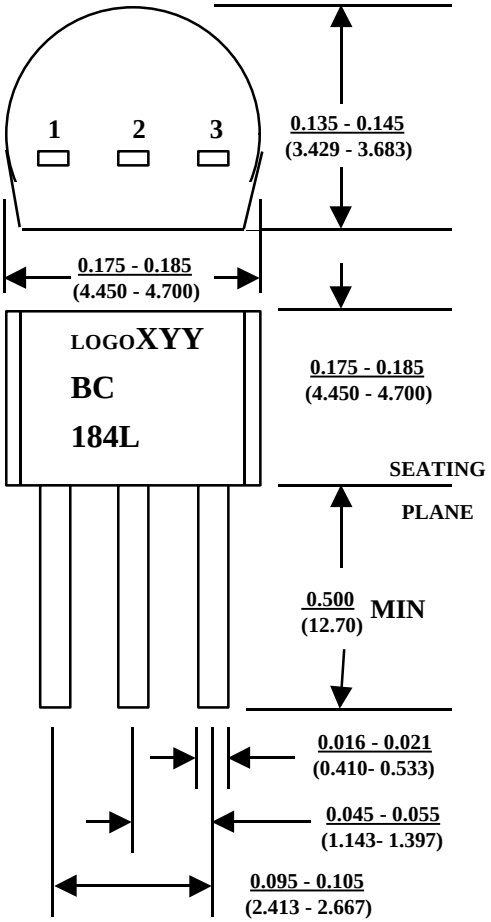
BC184L

SILICON NPN SMALL SIGNAL TRANSISTOR

BV_{CEO} . . . . 30 V (Min)

h_{FE} . . . . 130 (Min) @ V_{CE} = 5.0 V, I_C = 100 mA

1	2	3
B	C	E



ABSOLUTE MAXIMUM RATINGS (NOTE 1)

TEMPERATURES

Storage Temperature	-55 Degrees C to	150 Degrees C
Operating Junction Temperature		150 Degrees C

POWER DISSIPATION (NOTES 2 & 3)

Total Device Dissipation at TA = 25

VOLTAGES & CURRENT

V_{CEO}	Collector to Emitter	30 V
V_{CBO}	Collector to Base	45 V
V_{EBO}	Emitter to Base	5 V
I_C	Collector Current	500 mA

ELECTRICAL CHARACTERISTICS (25 Degrees C Ambient Temperature unless otherwise stated)

SYM	CHARACTERISTICS	MIN	MAX	UNITS	TEST CONDITIONS
BV_{CBO}	Collector to Base Voltage	45		V	I_C = 10 uA
BV_{CEO}	Collector to Emitter Voltage	30		V	I_C = 2.0 mA
BV_{EBO}	Emitter to Base Voltage	5		V	I_E = 10 uA
I_{CBO}	Collector Cutoff Current		15	nA	V_{CB} = 30 V
I_{EBO}	Emitter Cutoff Current		15	nA	V_{EB} = 4 V
h_{FE}	DC Current Gain	100 130			V_{CE} = 5.0 V I_C = 10 uA V_{CE} = 5.0 V I_C = 100 mA
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		0.6	V	C = 10mA I_B = 0.5mA I_C = 100mA I_B = 5.0mA
$V_{BE(sat)}$	Base-Emitter Saturation Voltage				C = 100mA I_B = 5.0mA
$V_{BE(on)}$	Base -Emitter On Voltage	0.55	0.7	V	V_{CE} = 5.0 V I_C = 2mA

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ELECTRICAL CHARACTERISTICS Con't (25 Degrees C Ambient Temperature unless otherwise stated)

SYM	CHARACTERISTICS	MIN	MAX	UNITS	TEST CONDITIONS
C_{OB}	Output Capacitance		5.0	pF	V_{CB} = 10 V, f = 1 MHz
fT	Current Gain - Bandwidth Product				V_{CE} = 5 V I_C = 10 mA f = 100 Mhz
hfe	Small Signal Current Gain	240	900	-	V_{CE} = 5 V, I_C=2.0 mA, f =1KHz
NF	Noise Figure		4	dB	V_{CE} = 5 V, I_C = 200 uA, Rg = 2 Kohms, f = 30Hz-15kHz

NOTES:

1. These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.
   These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
   These ratings are based on a maximum junction temperature of 150 degrees C.

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Definition of Terms

Datasheet Identification	Product Status	Definition
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