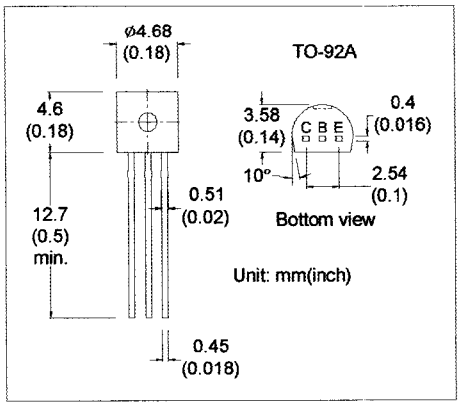
MICRO ELECTRONICS

NPN SILICON TRANSISTORS

DESCRIPTION

2N5830 and 2N5831 are NPN silicon planar transistors designed for small signal high voltage general purpose amplifiers.



ABSOLUTE MAXIMUM RATINGS

		2N5830	2N5831
Collector-Emitter Voltage	V_{CEO}	100V	140V
Collector-Base Voltage	V_{CBO}	120V	160V
Emitter-Base Voltage	V_{EBO}	5V	5V
Collector Current Continuous	I_C	600mA	600mA
Total Power Dissipation @ Ta=25°C	Ptot	625mW	625mW
Operating & Storage Junction Temperature	Tj,Tstg	-55 to +150°C	

ELECTRICAL CHARACTERISTICS

(Ta=25°C, unless otherwise noted)

PARAMETER	SYMBOL	2N5830 MIN	2N5830 MAX	2N5831 MIN	2N5831 MAX	UNIT	CONDITIONS
Collector-Emitter Breakdown Voltage	BV_{CEO}*	100		140		V	I_C=1mA I_B=0
Collector-Base Breakdown Voltage	BV_{CBO}	120		160		V	I_C=100μA I_E=0
Emitter-Base Breakdown Voltage	BV_{EBO}	5		5		V	I_E=10μA I_C=0
Collector Cutoff Current	I_{CBO}		50			nA	V_{CB}=100V I_E=0
					50	nA	V_{CB}=120V I_E=0
Emitter Cutoff Current	I_{EBO}		50		50	nA	V_{EB}=4V I_C=0
D.C. Current Gain	H_{FE}*	60		60			V_{CE}=5V I_C=1mA
		80	500	80	250		V_{CE}=5V I_C=10mA
		50		50			V_{CE}=5V I_C=50mA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$*		0.15		0.15	V	I_C=1mA I_B=0.1mA
			0.2		0.2	V	I_C=10mA I_B=1mA
			0.25		0.25	V	I_C=50mA I_B=5mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$*		0.8		0.8	V	I_C=1mA I_B=0.1mA
			1.0		1.0	V	I_C=10mA I_B=1mA
			1.0		1.0	V	I_C=50mA I_B=5mA
Base-Emitter Voltage	V_{BE}*		0.8		0.8	V	V_{CE}=5V I_C=1mA
Small Signal Current Gain	h_{fe}	60		60			V_{CE}=10V I_C=1mA f=1kHz
Collector-Base Capacitance	Ccb		4		4	pF	V_{CB}=10V I_E=0 f=1MHz

* Pulse test : Pulse width =300μs, duty clcle <2%.

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