

TYPES 2N342B AND 2N343B
N-P-N GROWN-JUNCTION SILICON TRANSISTORS

1 watt at 25°C Case Temperature
Guaranteed - 55°C, 25°C, 125°C Beta
Designed for
Audio and Servo Amplifier Stages

environmental tests

Each unit is heat cycled from -65° to $+175^{\circ}$ for ten cycles. A rigorous tumbling test subjects each unit to 12 mechanical shocks of up to 500 G's to ensure mechanical reliability. Each unit is thor-

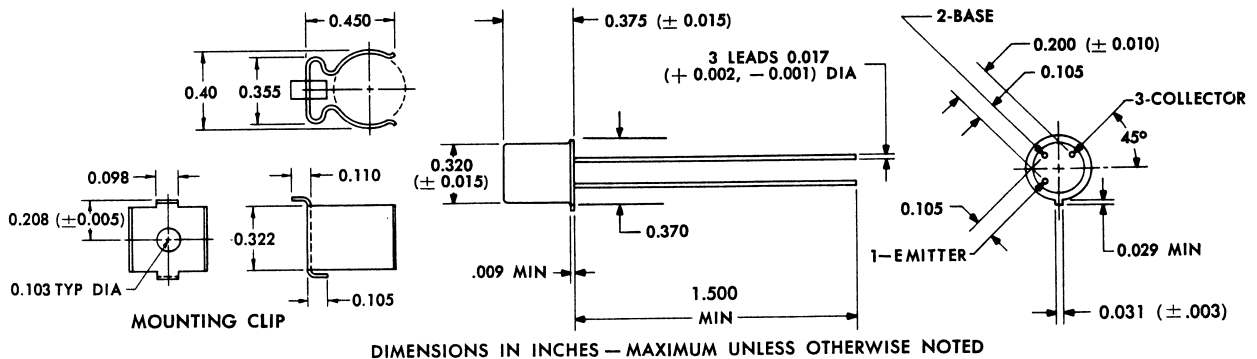
oughly tested to determine the electrical characteristics. Production samples are life tested at regularly scheduled periods to ensure maximum reliability under extreme operating conditions.

mechanical data

The transistor is in a JEDEC TO-11 hermetically sealed, welded package with glass-to-metal hermetic seal between case and leads. Approximate weight is 2.0 grams. The noninsulated mounting

clip (TI P/N 354001-99) is provided with each transistor. It is suitable for applications where thermal dissipation to a heat sink is desired. Material: beryllium copper, cadmium plated-gold iridited.

THE EMITTER IS IN ELECTRICAL CONTACT WITH THE CASE

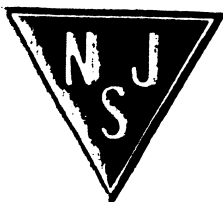


maximum ratings at 25°C ambient temperature (unless otherwise noted)

	2N342B	2N343B
Collector-Base Voltage	85v	65v
Collector-Emitter Voltage	85v	65v
Emitter-Base Voltage	2v	2v
Total device dissipation at case temperature 25°C (see note 1)	1000 mw	
Total device dissipation at 25°C ambient (see note 2)	750 mw	
Storage Temperature Range	-65°C to 150°C	

Note 1: Derate linearly to 150°C case temperature at the rate of 8.0 mw/°C.

Note 2: Derate linearly to 150°C ambient temperature at the rate of 6.0 mw/°C.



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

TYPES 2N342B AND 2N343B

N-P-N GROWN-JUNCTION SILICON TRANSISTORS

electrical characteristics at 25°C ambient temperature (unless otherwise noted)

PARAMETER	TEST CONDITION	2N342B		2N343B		UNIT
		MIN	MAX	MIN	MAX	
I_{CBO} Collector Reverse Current	$V_{CB} = 30v$ $I_E = 0$		1		1	μa
I_{CBO} Collector Reverse Current	$V_{CB} = 30v$ $I_E = 0$ $T_A = 150^\circ$		50		50	μa
I_{CBO} Collector Reverse Current	$V_{CB} = 65v$ $I_E = 0$				50	μa
I_{CBO} Collector Reverse Current	$V_{CB} = 85v$ $I_E = 0$		50			μa
I_{CEO} Collector Reverse Current	$V_{CE} = 65v$ $I_B = 0$				100	μa
I_{CEO} Collector Reverse Current	$V_{CE} = 85v$ $I_B = 0$		100			μa
I_{EBO} Emitter Reverse Current	$V_{EB} = 2v$ $I_C = 0$		100		100	μa
h_{fe} A-C Common-Emitter Forward Current Transfer Ratio	$V_{CE} = 10v$ $I_E = -5 ma$ $T_A = -55^\circ C$ $f = 1 kc$	9	32	24	90	
	$V_{CE} = 10v$ $I_E = -5 ma$ $T_A = 25^\circ C$ $f = 1 kc$	9	32	28	90	
	$V_{CE} = 10v$ $I_E = -5 ma$ $T_A = 125^\circ C$ $f = 1 kc$	9	32	28	90	
h_{fe} A-C Common-Emitter Forward Current Transfer Ratio	$V_{CE} = 5v$ $I_E = -1 ma$ $f = 1 kc$	7	32	20	90	
h_{ie} A-C Common-Emitter Input Resistance	$V_{CE} = 10v$ $I_E = -5 ma$ $f = 1 kc$		500		1000	ohms
h_{ib} A-C Common-Base Input Resistance	$V_{CB} = 10v$ $I_E = -5 ma$ $f = 1 kc$		30		30	ohms
h_{rb} A-C Common-Base Reverse Voltage Transfer Ratio	$V_{CB} = 10v$ $I_E = -5 ma$ $f = 1 kc$		300		300	ohms
h_{ob} A-C Common-Base Output Admittance	$V_{CB} = 10v$ $I_E = -5 ma$ $f = 1 kc$		2		2	μmho
C_{ob} Common Base Output Capacitance	$V_{CB} = 10v$ $I_E = 0$ $f = 1 kc$		20		20	$\mu \mu f$
R_{cs} Saturation Resistance	$I_C = 20 ma$ $I_B = 3 ma$		200		200	ohms