


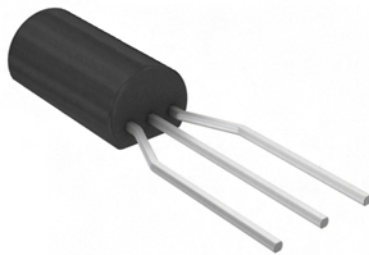
400V PNP High Voltage Transistor in TO92L

Features and Benefits

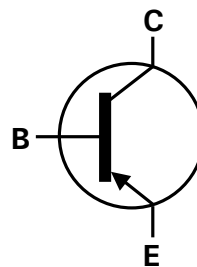
- $BV_{CEO} > 400V$
- Power dissipation $P_D = 1W$
- **Totally Lead-Free & Fully RoHS compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **Qualified to AEC-Q101 Standards for High Reliability**

Mechanical Data

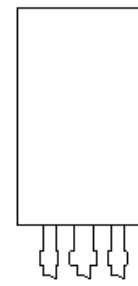
- Case: TO92L (Long Body)
- Case Material: molded plastic, "Green" molding compound.
- UL Flammability Classification Rating 94V-0
- Terminals: Finish - Bright Tin 
- Weight: 0.272 grams (approximate)



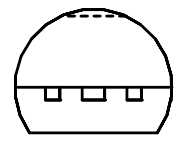
TO92L (Long Body)
Joggled Leads



Device Symbol



E C B
Flat Face
View



B C E
Bottom View

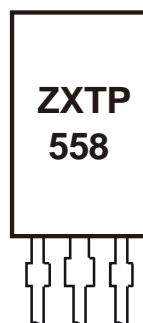
Pin-Out

Ordering Information (Note 4)

Product	Package	Marking	Leads	Quantity
ZXTP558LSTZ	TO92L	ZXTP558	Joggled	2,000 taped per Ammo Box

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.
 2. See <http://www.diodes.com> for more information about Diodes Incorporated's definitions of Halogen and Antimony free, "Green" and Lead-Free.
 3. Halogen and Antimony free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <http://www.diodes.com>.

Marking Information



ZXTP558 = Product Type Marking Code

Maximum Ratings (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	-400	V
Collector-Emitter Voltage	V_{CEO}	-400	V
Emitter-Base Voltage	V_{EBO}	-7	V
Continuous Collector Current	I_C	-500	mA

Thermal Characteristics (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P_D	1	W
Thermal Resistance, Junction to Ambient (Note 5)	$R_{\theta JA}$	125	$^\circ\text{C/W}$
Thermal Resistance, Junction to Lead (Note 6)	$R_{\theta JL}$	50	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

ESD Ratings (Note 7)

Characteristic	Symbol	Value	Unit	JEDEC Class
Electrostatic Discharge - Human Body Model	ESD HBM	$\geq 8,000$	V	3B
Electrostatic Discharge - Machine Model	ESD MM	≥ 400	V	C

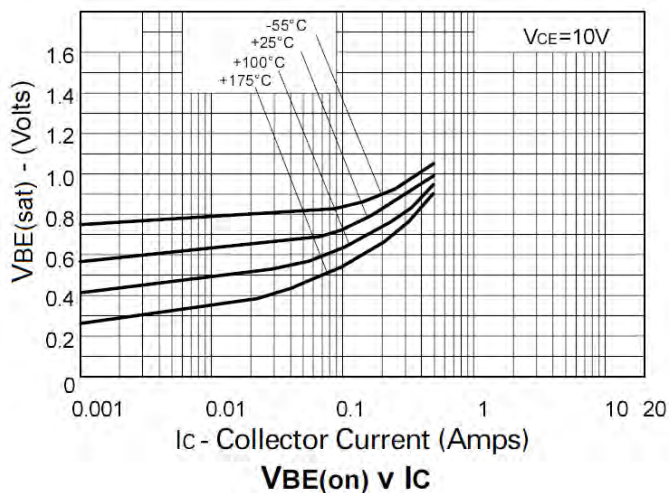
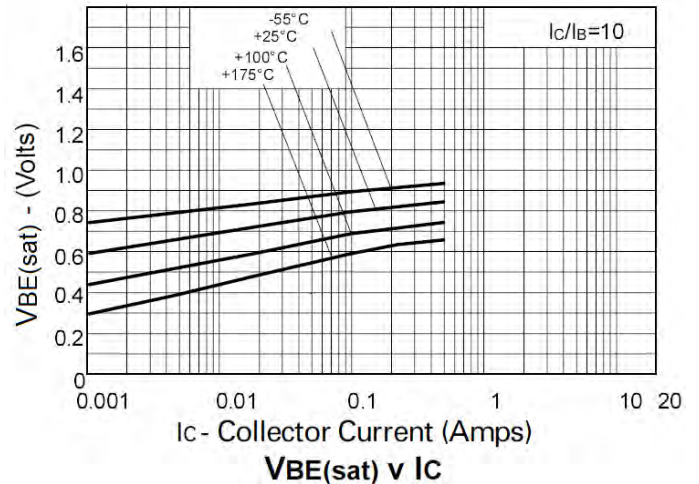
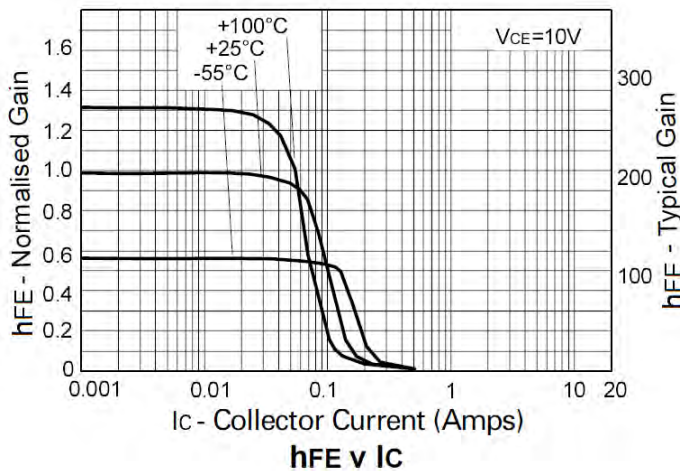
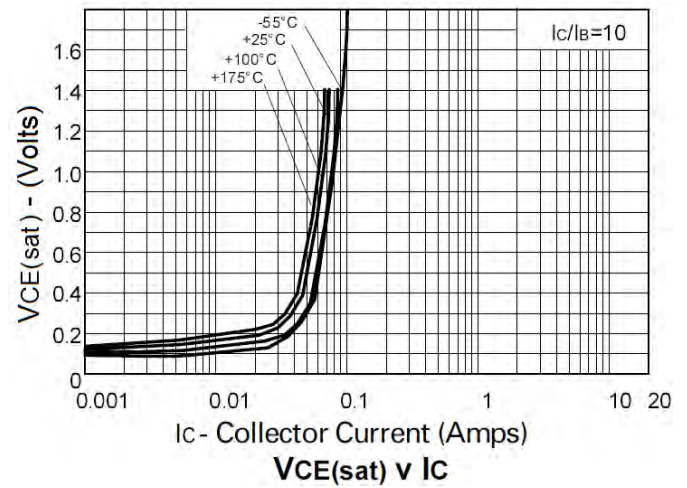
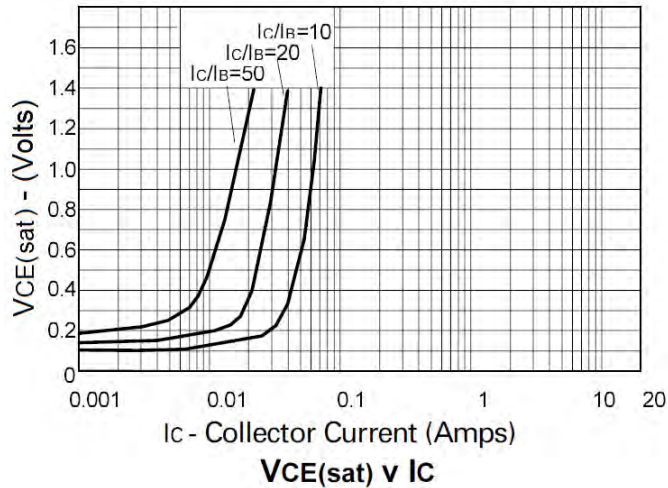
- Notes:
5. For the through-hole device mounted vertically, in still air conditions, with the lead length 6mm from the bottom of package to the board.
 6. Thermal resistance from junction to solder-point (2mm from the bottom of package along the collector lead).
 7. Refer to JEDEC specification JESD22-A114 and JESD22-A115.

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

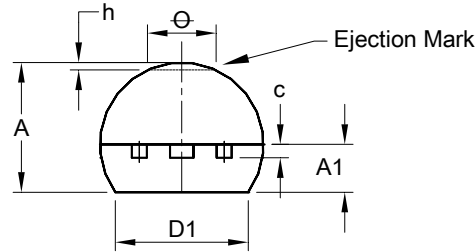
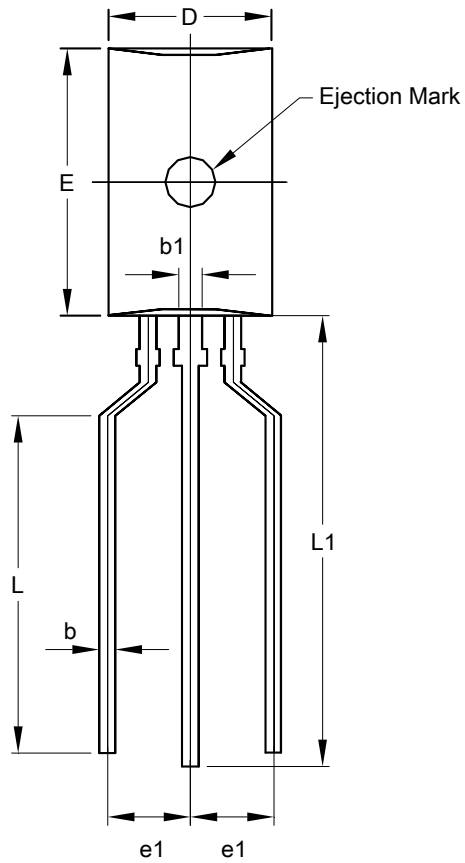
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Collector-Base Breakdown Voltage	BV _{CB0}	-400	—	—	V	I _C = -100μA
Collector-Emitter Breakdown Voltage (Note 8)	BV _{CEO}	-400	—	—	V	I _C = -1mA
Emitter-Base Breakdown Voltage	BV _{EBO}	-7	—	—	V	I _E = -100μA
Collector Cutoff Current	I _{CB0}	—	—	-100	nA	V _{CB} = -320V
Emitter Cutoff Current	I _{CES}	—	—	-100	nA	V _{CE} = -320V
Base Cutoff Current	I _{EBO}	—	—	-100	nA	V _{BE} = -5V
DC Current Gain (Note 8)	h _{FE}	100 100	— —	— 300	—	I _C = -1mA, V _{CE} = -10V I _C = -50mA
Collector-Emitter Saturation Voltage (Note 8)	V _{CE(sat)}	— —	— —	-0.2 -0.5	V	I _C = -20mA, I _B = -2mA I _C = -50mA, I _B = -6mA
Base-Emitter Turn-On Voltage	V _{BE(on)}	—	—	-0.9	V	V _{CE} = -10V, I _C = -50mA
Base-Emitter Saturation Voltage	V _{BE(sat)}	—	—	-0.9	V	I _C = -50mA, I _B = -5mA
Output Capacitance (Note 8)	C _{obo}	—	—	5	pF	V _{CB} = -20V, f = 1.0MHz
Current Gain-Bandwidth Product	f _T	50	—	—	MHz	V _{CE} = -20V, I _C = -10mA, f = 20MHz
Turn-On Time	t _{on}	—	95	—	ns	V _{CE} = -100V, I _C = -50mA
Turn-Off Time	t _{off}	—	1600	—	ns	I _{B1} = 5mA, I _{B2} = -10mA

Note: 8. Measured under pulsed conditions. Pulse width ≤ 300μs; Duty cycle ≤ 2%.

Typical Electrical Characteristics (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)



Package Outline Dimensions



TO92L		
Dim	Min	Max
A	3.70	4.10
A1	1.28	1.58
b	0.35	0.55
b1	0.60	0.80
c	0.35	0.45
D	4.70	5.10
D1	4.00	-
e1	2.30	2.70
E	7.80	8.20
L	10.10	10.70
L1	13.80	14.20
h	0.00	0.30
θ	-	1.60
All Dimensions in mm		

Taped

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