



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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ZXTP4003Z
100V PNP LED DRIVING TRANSISTOR IN SOT89
Features

- $BV_{CEO} > -100V$
- Maximum continuous current $I_C = -1A$
- $h_{FE} > 100$ @ $I_C = -150mA$, $V_{CE} = -0.2V$
- **Lead Free, RoHS Compliant (Note 1)**
- **Halogen and Antimony Free "Green" Device (Note 2)**
- **Qualified to AEC-Q101 Standards for High Reliability**

Applications

- LED TV backlight

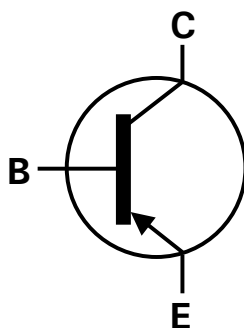
Mechanical Data

- Case: SOT89
- Case material: molded Plastic. "Green" molding Compound.
- UL Flammability Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish
- Weight: 0.052 grams (Approximate)

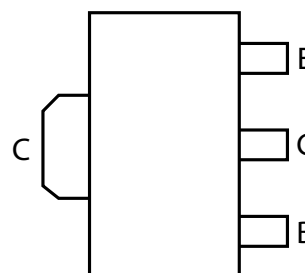
SOT89



Top View



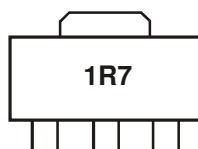
Device Symbol


Top View
Pin-Out

Ordering Information (Note 3)

Product	Marking	Reel size (inches)	Tape width (mm)	Quantity per reel
ZXTP4003ZTA	1R7	7	12	1000 units

- Notes:
1. No purposefully added lead.
 2. "Green" devices, Halogen and Antimony Free, Diodes Inc's "Green" Policy can be found on our website at <http://www.diodes.com>
 3. For Packaging Details, go to our website at <http://www.diodes.com>.

Marking Information


1R7 = Product type Marking Code

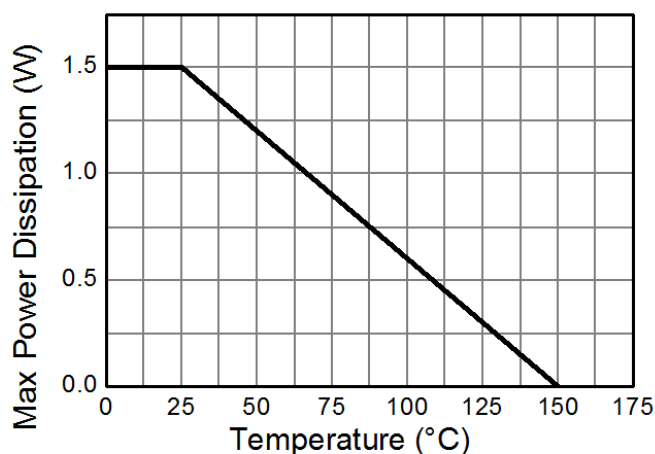
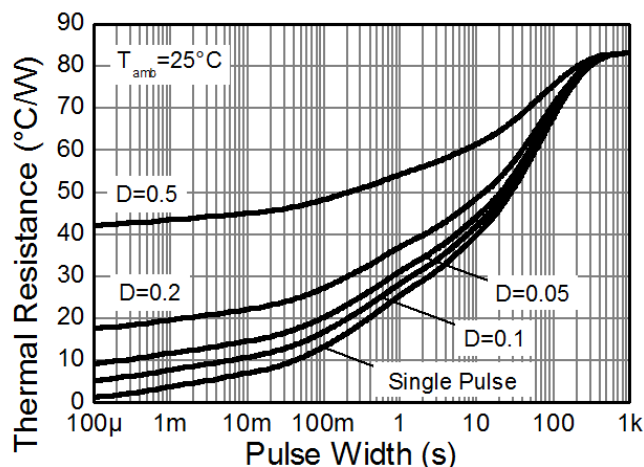
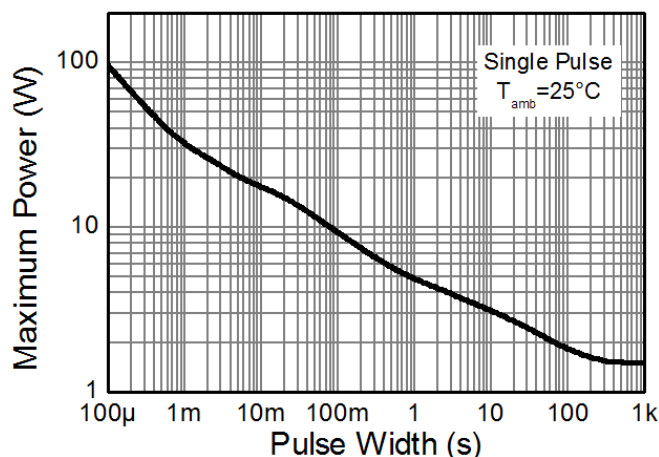
Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	-100	V
Collector-Emitter Voltage	V _{CEO}	-100	V
Emitter-Base Voltage	V _{EBO}	-7	V
Continuous Collector Current	I _C	-1	A
Peak Pulse Current (Note 4)	I _{CM}	-3	A
Base Current	I _B	-500	mA

Thermal Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P _D	1.5	W
Thermal Resistance, Junction to Ambient (Note 5)	R _{θJA}	83	°C/W
Thermal Resistance, Junction to Leads (Note 6)	R _{θJL}	17.46	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

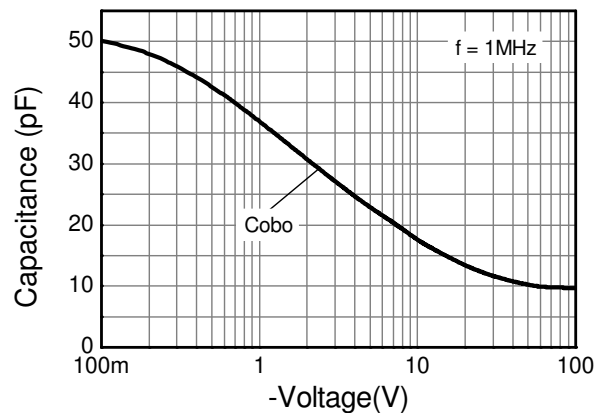
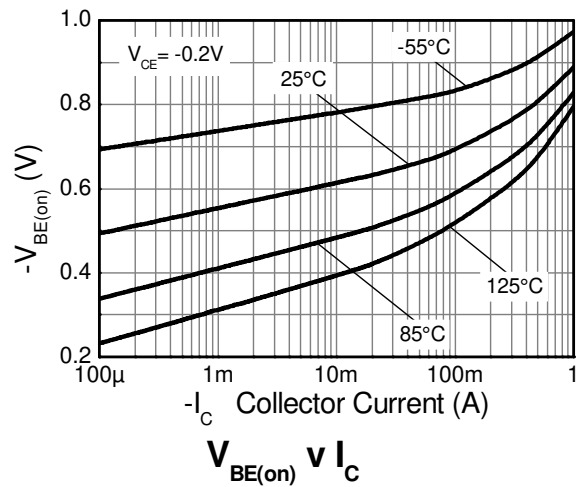
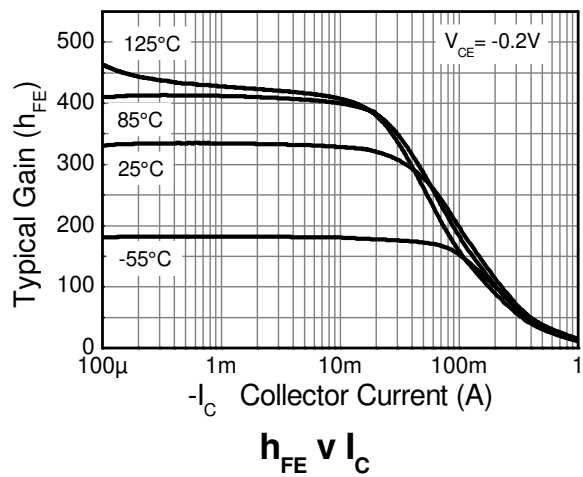
- Notes:
4. Measured under pulsed conditions. Pulse width = 300μs. Duty cycle ≤ 2%.
 5. For a device surface mounted on 25mm X 25mm FR4 PCB with high coverage of single sided 1 oz copper, in still air conditions
 6. Thermal resistance from junction to solder-point (on the exposed collector pad).

Thermal Characteristics and Derating Information

Derating Curve

Transient Thermal Impedance

Pulse Power Dissipation

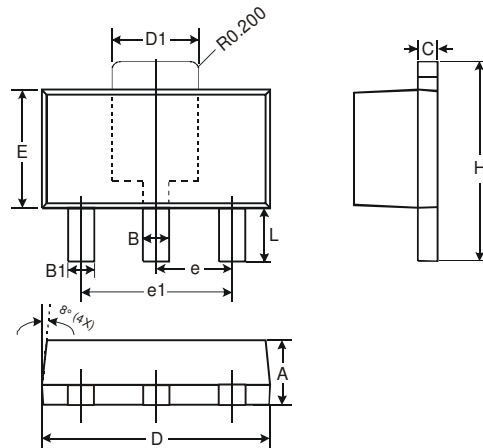
Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Collector-Emitter Breakdown Voltage (Note 7)	BV _{CEO}	-100	-170	-	V	I _C = -10mA
Collector Cut-off Current	I _{CBO}	-	-	-50	nA	V _{CB} = -100V
Emitter Cut-off Current	I _{EBO}	-	-	-50	nA	V _{EB} = -7V
Static Forward Current Transfer Ratio (Note 7)	h _{FE}	60 100	133 112	-	-	I _C = -85mA, V _{CE} = -0.15V I _C = -150mA, V _{CE} = -0.2V
Base-Emitter Turn-On Voltage (Note 7)	V _{BE(on)}	-	-0.71	-0.95	V	I _C = -150mA, V _{CE} = -0.2V
Delay Time	t _d	-	378	-	ns	V _{CC} = -80V, I _C = -150mA, f -I _{B2} = 1.5mA, V _{CE(ON)} = -0.2V
Rise Time	t _r	-	388	-	ns	
Storage Time	t _s	-	1348	-	ns	
Fall Time	t _f	-	382	-	ns	V _{CC} = -80V, I _C = -150mA, -I _{B2} = -1.5mA, V _{CE(ON)} = -4V
Storage Time	t _s	-	75	-	ns	
Fall Time	t _f	-	363	-	ns	

Notes: 7. Measured under pulsed conditions. Pulse width = 300μs. Duty cycle ≤ 2%

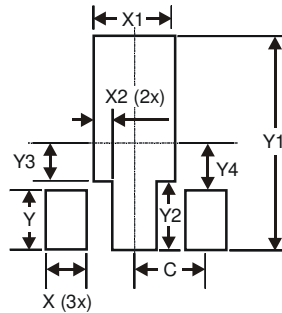
Electrical Characteristics @T_A = 25°C unless otherwise specified


Package Outline Dimensions



SOT89		
Dim	Min	Max
A	1.40	1.60
B	0.44	0.62
B1	0.35	0.54
C	0.35	0.43
D	4.40	4.60
D1	1.52	1.83
E	2.29	2.60
e	1.50 Typ	
e1	3.00 Typ	
H	3.94	4.25
L	0.89	1.20
All Dimensions in mm		

Suggested Pad Layout



Dimensions	Value (in mm)
X	0.900
X1	1.733
X2	0.416
Y	1.300
Y1	4.600
Y2	1.475
Y3	0.950
Y4	1.125
C	1.500

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