



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.

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Features

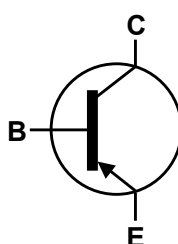
- $BV_{CEO} > -20V$
- $I_C = -1A$ Continuous Collector Current
- $I_{CM} = -3A$ Peak Pulse Current
- Low Saturation Voltage -250mV Max @ $I_C = -1A$.
- $R_{CE(SAT)} = 200m\Omega$ @ 1A for a Low Equivalent On-Resistance
- 500mW Power Dissipation
- Excellent h_{FE} Characteristics up to 3A
- Complementary NPN Type: ZUMT618
- **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

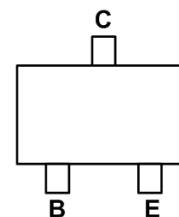
- Case: SOT323
- Case Material: Molded Plastic. "Green" Molding Compound
UL Flammability Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - Matte Tin Plated Leads, Solderable per
MIL-STD-202, Method 208 **(e3)**
- Weight: 0.006 grams (approximate)



Top View



Device Symbol



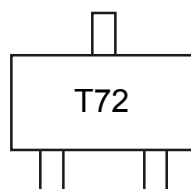
Top View
Pin-Out

Ordering Information (Notes 4)

Device	Compliance	Marking	Reel Size (inches)	Tape Width (mm)	Quantity per reel
ZUMT718TA	AEC-Q101	T72	7	8	3,000

- 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/quality/lead_free.html 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/products/packages.html>.

Marking Information



T72 = Product Type Marking Code

Absolute Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	-20	V
Collector-Emitter Voltage	V _{CEO}	-20	V
Emitter-Base Voltage	V _{EBO}	-7	V
Peak Pulse Current	I _{CM}	-3	A
Continuous Collector Current	I _C	-1	A
Base Current	I _B	-200	mA

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

Characteristic	Symbol	Value	Unit
Power Dissipation	P _D	385	mW
		500	
Thermal Resistance, Junction to Ambient	R _{θJA}	325	°C/W
		250	
Thermal Resistance, Junction to Leads	R _{θJL}	350	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

ESD Ratings (Note 8)

Characteristic	Symbol	Value	Unit	JEDEC Class
Electrostatic Discharge - Human Body Model	ESD HBM	4,000	V	3A
Electrostatic Discharge - Machine Model	ESD MM	400	V	C

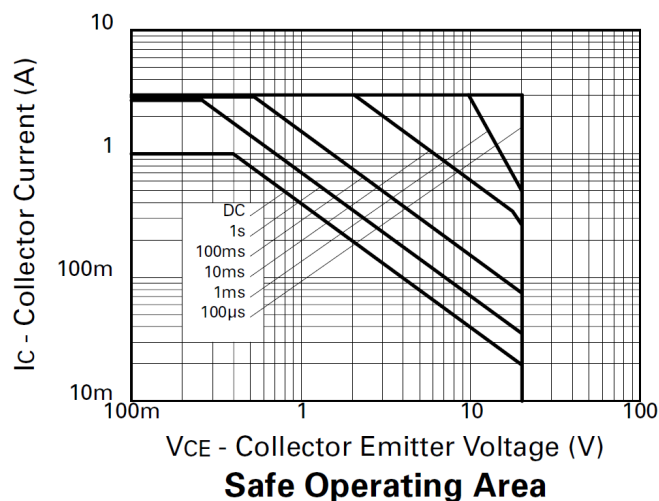
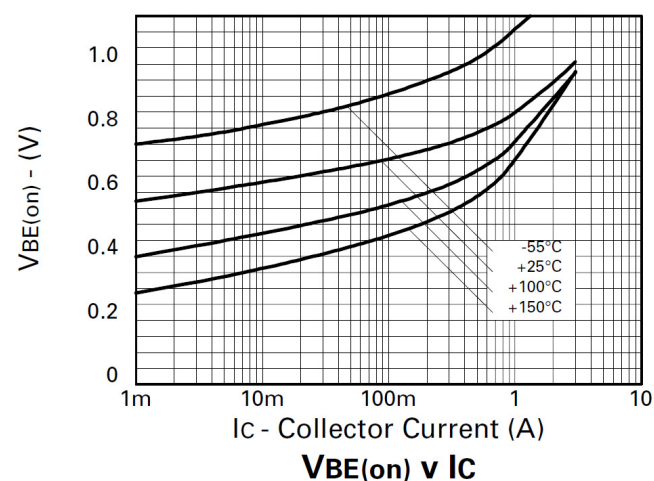
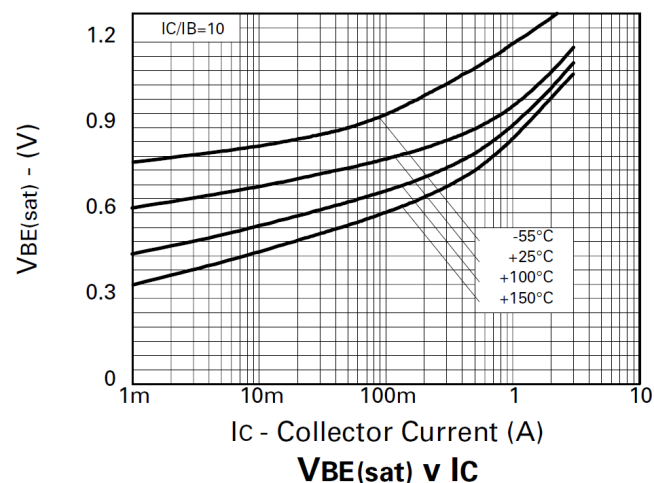
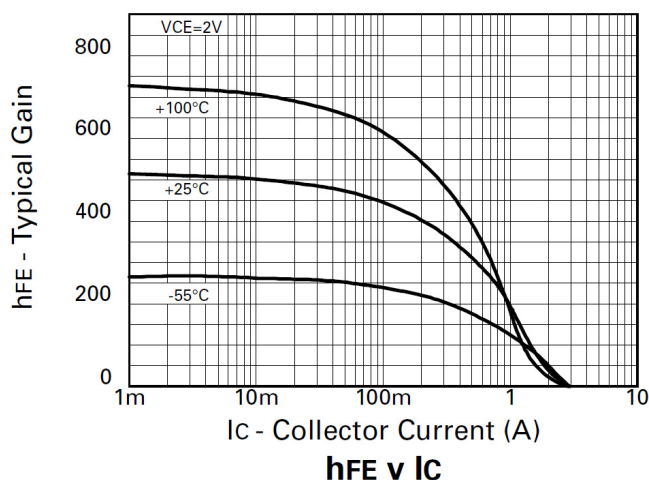
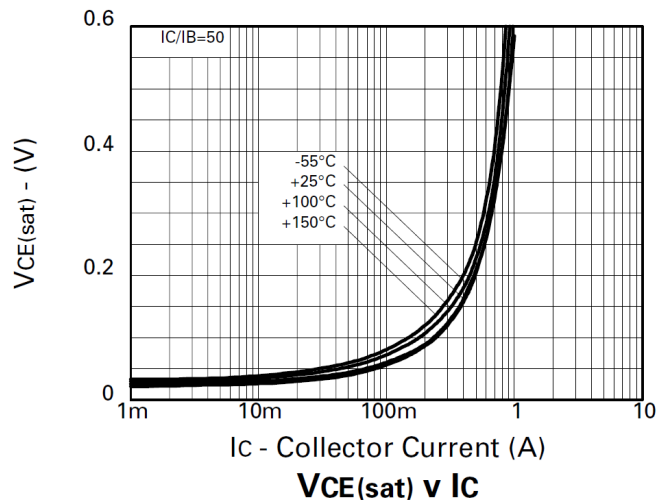
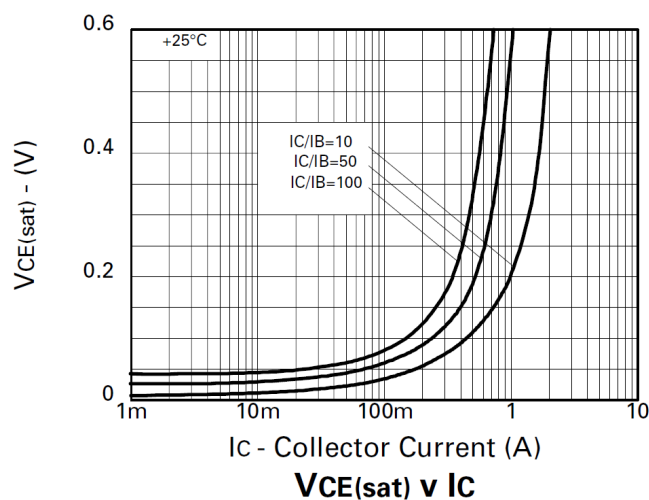
- Notes:
5. For a device mounted with collector lead on 10mm x 8mm 1oz copper that is on a single-sided 0.6mm FR4 PCB; device is measured under still air conditions whilst operating in a steady-state.
 6. Same as note (5), except the collector lead is on a 25mm x 25mm 1oz copper.
 7. Thermal resistance from junction to solder-point (at the end of the leads).
 8. 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
OFF CHARACTERISTICS (Note 9)						
Collector-Base Breakdown Voltage	V _{CBO}	-20	—	—	V	I _C = -100μA
Collector-Emitter Breakdown Voltage	V _{CEO}	-20	—	—	V	I _C = -10mA
Emitter-Base Breakdown Voltage	V _{EBO}	-7	—	—	V	I _E = -100μA
Collector-Base Cutoff Current	I _{CBO}	—	—	-10	nA	V _{CB} = -15V
Emitter-Base Cutoff Current	I _{EBO}	—	—	-10	nA	V _{EB} = -4.0V
Collector-Emitter Cutoff Current	I _{CES}	—	—	-10	nA	V _{CES} = -15V
ON CHARACTERISTICS (Note 9)						
DC Current Gain	h _{FE}	300 300 200 100 20	490 450 315 160 75	—	—	I _C = -10mA, V _{CE} = -2.0V I _C = -0.1A, V _{CE} = -2.0V I _C = -0.5A, V _{CE} = -2.0V I _C = -1A, V _{CE} = -2.0V I _C = -1.5A, V _{CE} = -2.0V
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	—	-33.5 -80 -130 -180	-45 -110 -175 -250	mV mV mV mV	I _C = -0.1A, I _B = -10mA I _C = -0.25A, I _B = -10mA I _C = -0.5A, I _B = -20mA I _C = -1A, I _B = -100mA
Base-Emitter Saturation Voltage	V _{BE(SAT)}	—	-970	-1100	mV	I _C = -1A, I _B = 100mA
Base-Emitter Turn-On Voltage	V _{BE(ON)}	—	-850	-1100	mV	I _C = -1A, V _{CE} = -2.0V
SMALL SIGNAL CHARACTERISTICS						
Output Capacitance	C _{obo}	—	11	—	pF	V _{CB} = -10V, f = 1MHz
Turn-On Time	t _(on)	—	60	—	ns	V _{CC} = -10V, I _C = -1A,
Turn-Off Time	t _(off)	—	135	—	ns	I _{B1} = -I _{B2} = -100mA
Current Gain-Bandwidth Product	f _T	—	210	—	MHz	V _{CE} = -10V, I _C = -50mA, f = 100MHz

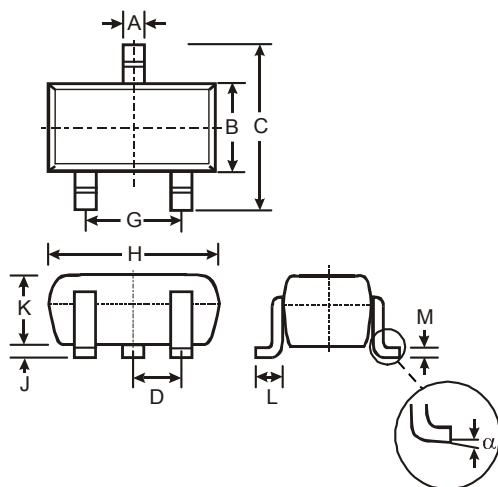
Note: 9. Measured under pulsed conditions. Pulse width ≤ 300μs. Duty cycle ≤ 2%.

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



Package Outline Dimensions

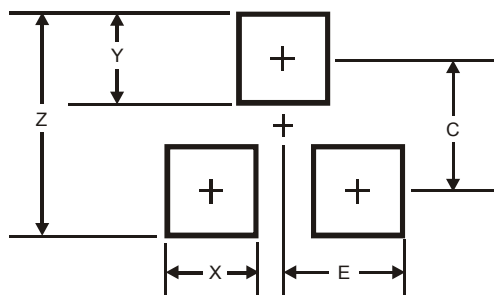
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.



SOT323			
Dim	Min	Max	Typ
A	0.25	0.40	0.30
B	1.15	1.35	1.30
C	2.00	2.20	2.10
D	-	-	0.65
G	1.20	1.40	1.30
H	1.80	2.20	2.15
J	0.0	0.10	0.05
K	0.90	1.00	1.00
L	0.25	0.40	0.30
M	0.10	0.18	0.11
α	0°	8°	-
All Dimensions in mm			

Suggested Pad Layout

Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for the latest version.



Dimensions	Value (in mm)
Z	2.8
X	0.7
Y	0.9
C	1.9
E	1.0

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