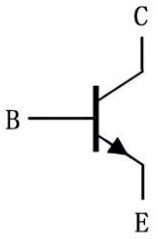
Features

- Extremely low saturation voltage
- 250mW power dissipation
- 1 Amp continuous collector current (I_C)

Applications

- Ideally suited for space / weight critical applications

SOT-323 top view



Schematic diagram

Pb-Free RoHS Halogen-Free

Maximum Ratings (Ta=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	1	A
P_C	Collector Power Dissipation	250	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	500	°C/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Ordering Information (Example)

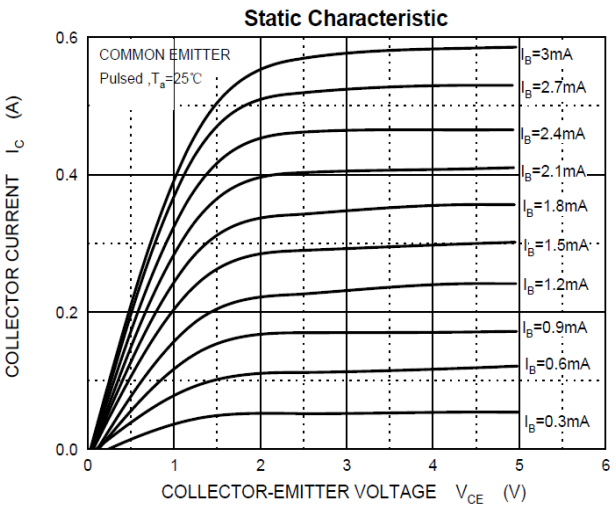
Type	Package	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
ZUMT491	SOT-323	3,000	45,000	180,000	7"reel

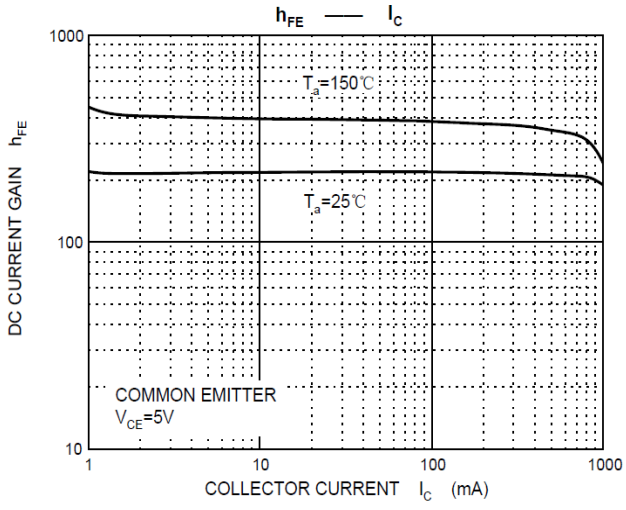
Electrical Characteristics (Ta=25℃ unless otherwise specified)

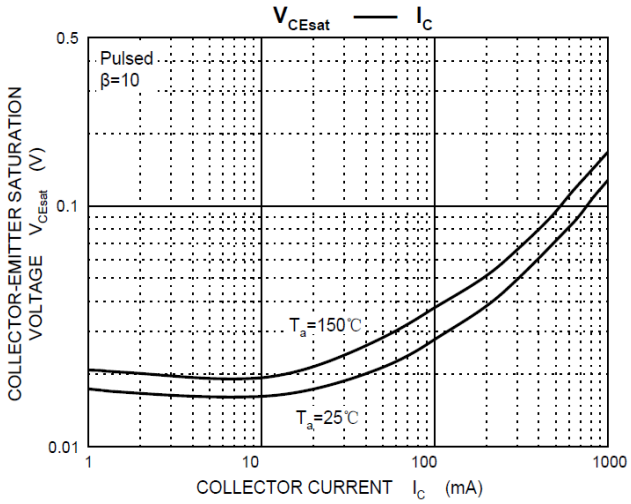
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=100μA,I_E=0	80	--	--	V
$V_{(BR)CEO}$*	Collector-emitter breakdown voltage	I_C=10mA, I_B=0	60	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=100μA,I_C=0	5	--	--	V
I_{CBO}	Collector cut-off current	V_{CB}=60V , I_E=0	--	--	0.1	μA
I_{CES}	Collector cut-off current	V_{CES}=60V,I_B=0	--	--	0.1	μA
I_{EBO}	Emitter cut-off current	V_{EB}=4V , I_C=0	--	--	0.1	μA
$H_{FE(1)}$	DC current gain	V_{CE}=5V, I_C=1mA	100	--	--	
$H_{FE(2)}$*		V_{CE}=5V, I_C=500mA	100	--	300	
$H_{FE(3)}$*		V_{CE}=5V, I_C=1A	80	--	--	
$H_{FE(4)}$*		V_{CE}=5V, I_C=2A	30	--	--	
$V_{CE(sat)1}$*	Collector-emitter saturation voltage	I_C=500mA, I_B=50mA	--	--	0.25	V
$V_{CE(sat)2}$*		I_C=1A,I_B=100mA	--	--	0.5	V
$V_{BE(sat)}$*	Base emitter saturation voltage	I_C=1A, I_B=100mA	--	--	1.1	V
$V_{BE(on)}$*	Base emitter turn on voltage	V_{CE}=5V,I_C=1A	--	--	1	V
f_T	Transition frequency	V_{CE}=10V, I_C=50mA,f=100MHz	150	--	--	MHz
C_{ob}	Collector output capacitance	V_{CB}=10V, I_E=0, f=1MHz	--	--	10	pF

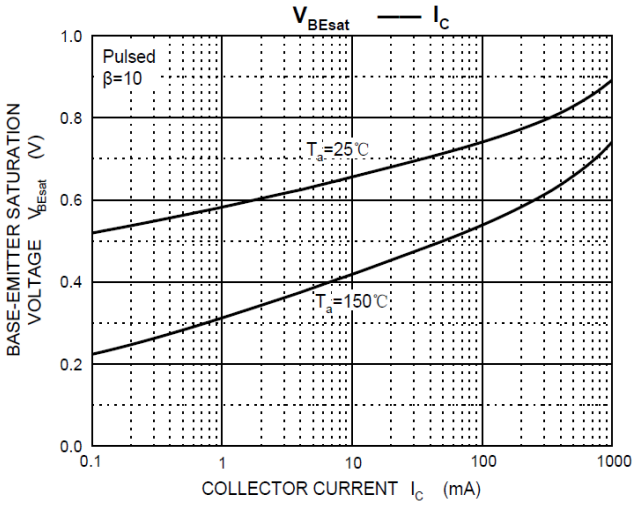
*Measured under pulsed conditions. Pulse width 300μs，Duty cycle≤2%.

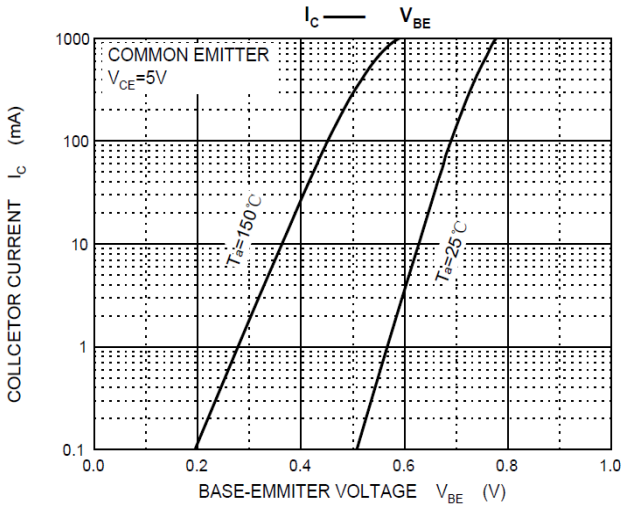
Typical Characteristics

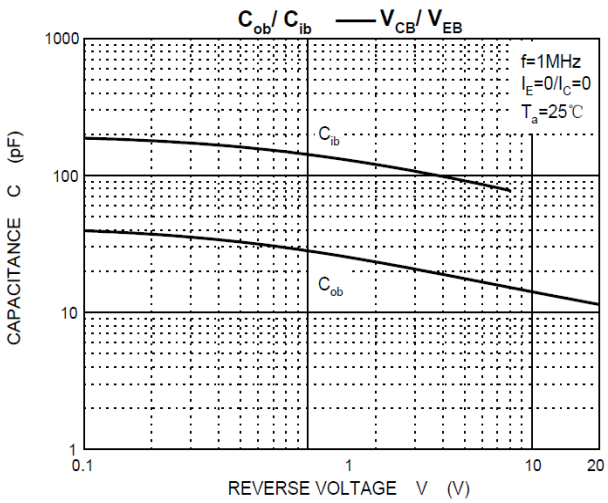


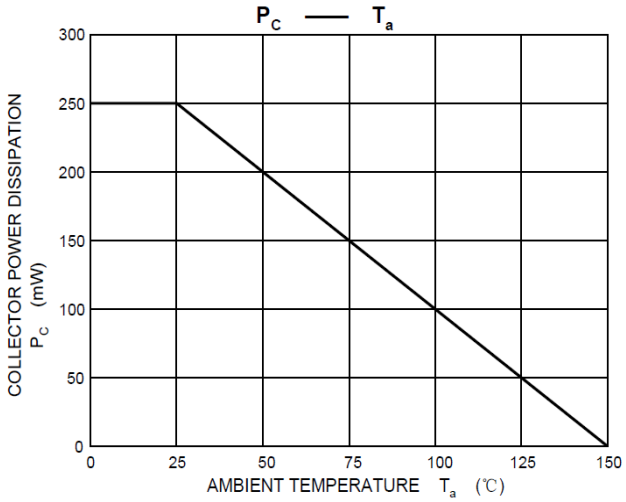




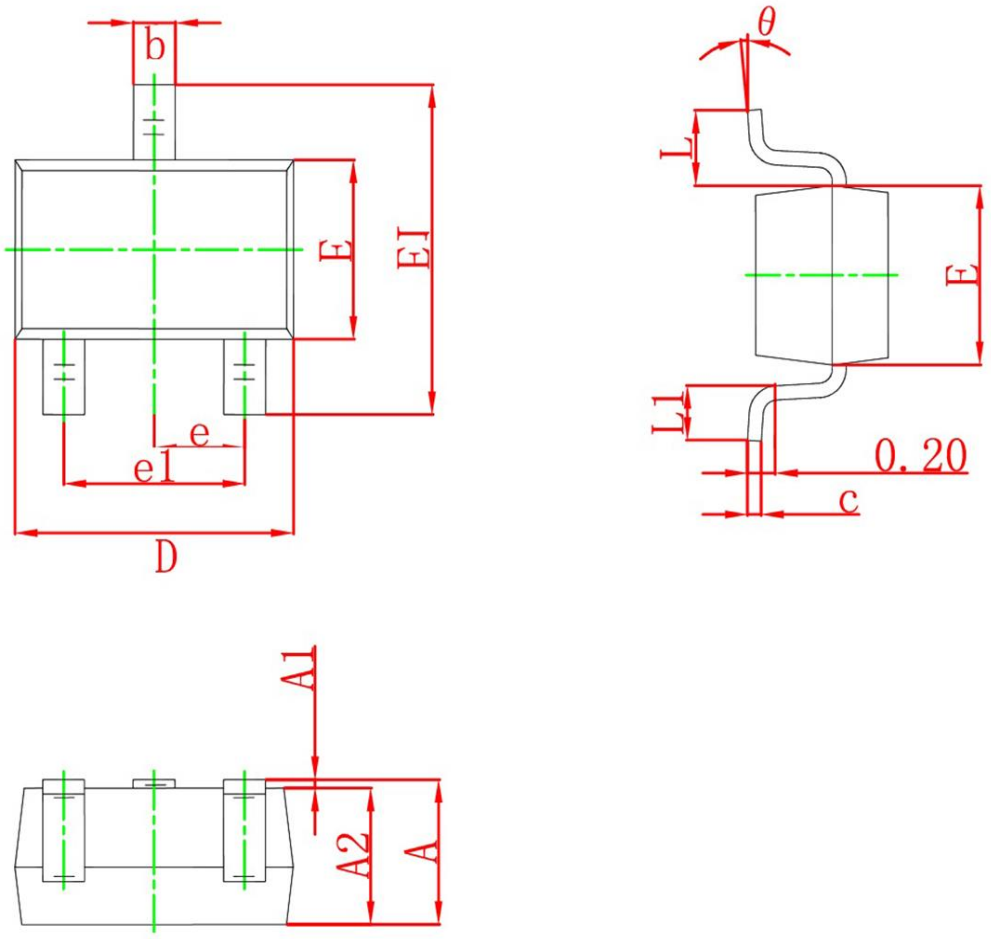








SOT-323 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650TYP		0.026TYP	
e1	1.200	1.400	0.047	0.055
L	0.525REF		0.021REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°