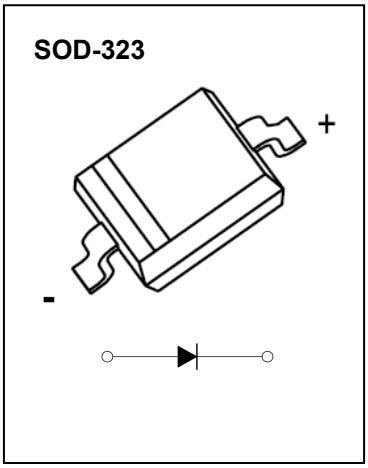
BAT42WS-Q1/BAT43WS-Q1

SOD-323 Plastic-Encapsulate Diodes

FEATURES

- Low Forward Voltage Drop
- Fast Switching Time
- Surface Mount Package Ideally Suited for Automatic Insertion
- Compliant to Halogen - free
- Suffix "-Q1" for AEC-Q101



MARKING:

BAT42WS-Q1	BAT43WS-Q1
- S7 +	- S8 +

Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25℃

Parameter	Symbol	Limit	Unit
Peak Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Forward Continuous Current	I_{FM}	200	mA
Repetitive Peak Forward Current @t<1.0s	I_{FRM}	500	mA
Non-repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	4.0	A
Power Dissipation	Pd	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	℃/W
Junction temperature	T_J	125	℃
Storage Temperature	T_{STG}	-55~+150	℃

Electrical Ratings @Ta=25℃

Parameter		Symbol	Min	Typ	Max	Unit	Conditions
Reverse breakdown voltage		$V_{(BR)}$	30			V	I_R=10μA
Forward voltage	Both Types	V_F			1.0	V	I_F=200mA
	BAT42WS-Q1	V_F			0.4	V	I_F=10mA
	BAT42WS-Q1	V_F			0.65	V	I_F=50mA
	BAT43WS-Q1	V_F	0.26		0.33	V	I_F=2mA
	BAT43WS-Q1	V_F			0.45	V	I_F=15mA
Reverse current		I_R			0.5	μA	V_R=25V
Capacitance between terminals		C_T			10	pF	V_R=1.0V,f=1.0MHz
Reverse recovery time		t_{rr}			5	ns	I_F=I_R=10mA Irr=0.1XI_R,R_L=100Ω

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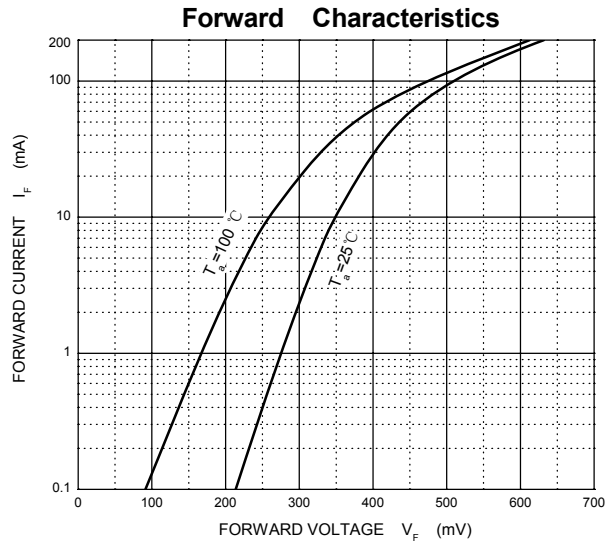
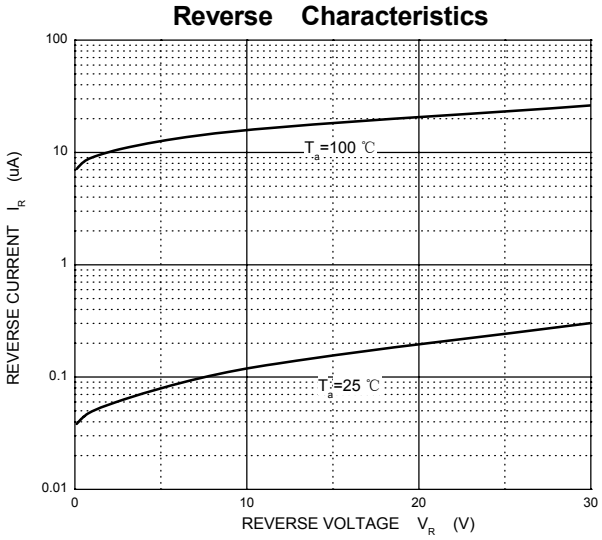
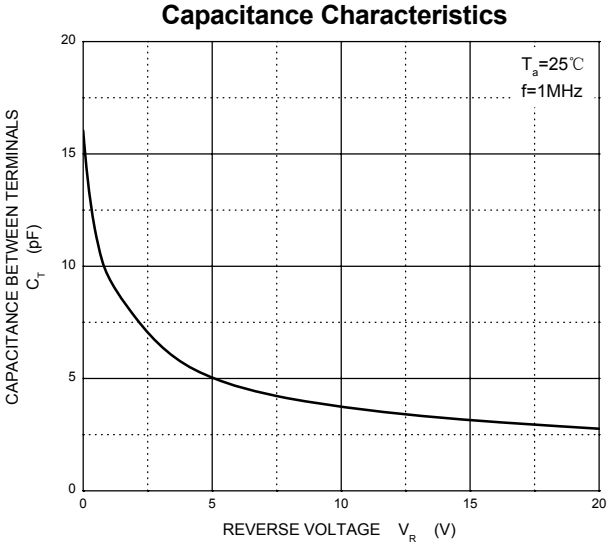
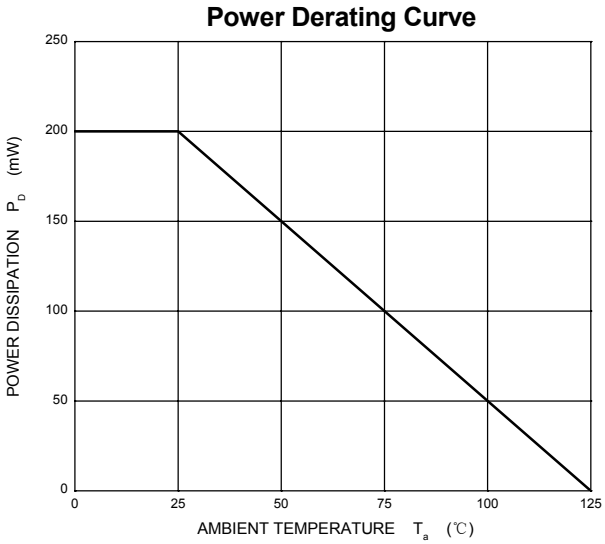
Typical Characteristics









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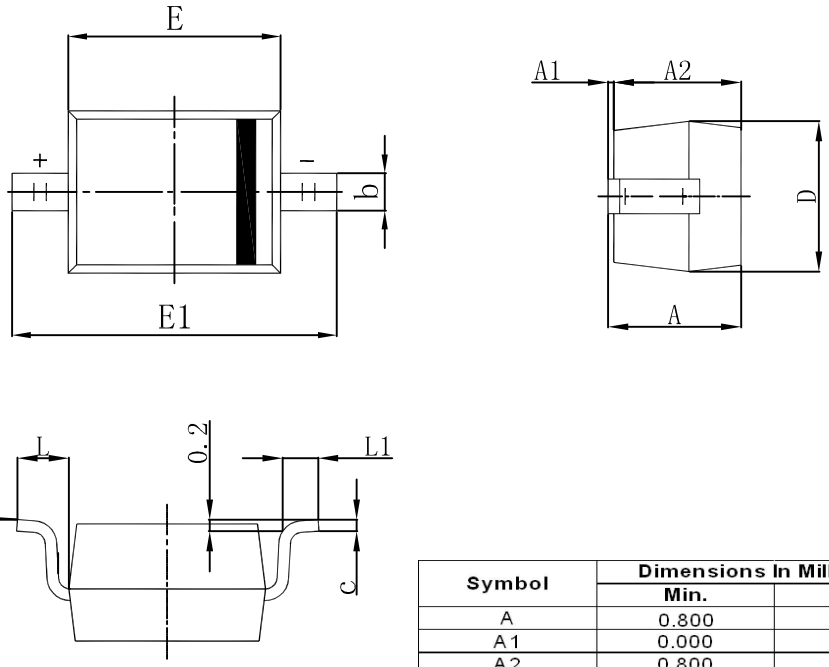
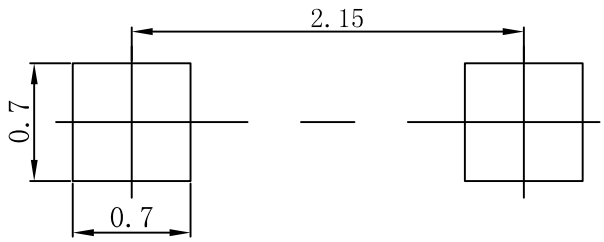
SOD-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.800	1.000	0.031	0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.200	0.003	0.008
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.450	2.750	0.098	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

SOD-323 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.