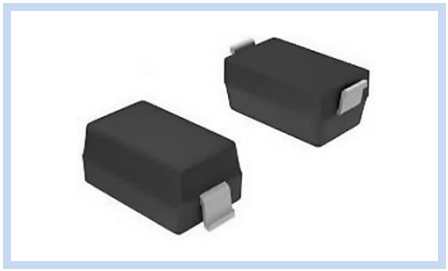
Schottky Barrier Rectifier
0.2A 30V SOD-123

BAT42W

MERITEK

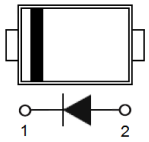
FEATURE

- High-Speed Switching
- Low Forward Voltage Drop
- PN Junction Guard Ring for Transient and ESD Protection



MECHANICAL DATA

- Case: SOD-123 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color Band Denotes Cathode End



RoHS

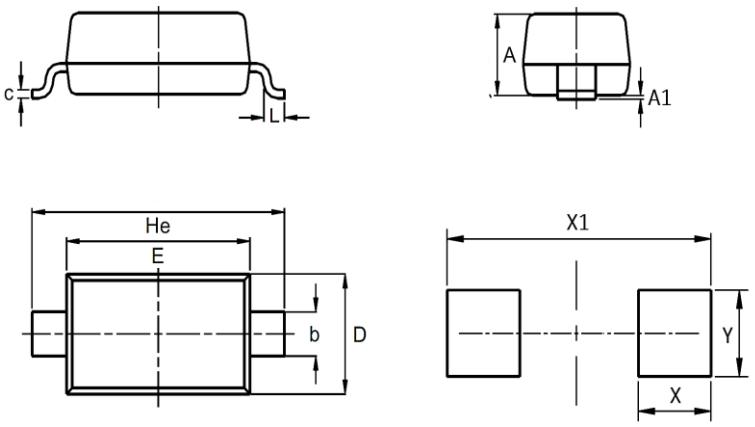
MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	30	V
Maximum RMS Voltage		V_{RMS}	21	V
Maximum DC Blocking Voltage		V_{DC}	30	V
Maximum Average Forward Rectified Current	T_A=25°C	$I_{F(AV)}$	0.2	A
Peak Forward Surge Current, 1.0ms single half-sine-wave superimposed on rated load		I_{FSM}	4.0	A
Maximum Instantaneous Forward Voltage	I_F=10mA	V_F	0.4	V
	I_F=200mA		1.0	
Maximum Reserve Current at Rated DC Blocking Voltage		I_R	0.5	μA
Maximum Thermal Resistance		$R_{\theta JA}$	635	°C/W
Operating Junction and Storage Temperature Range		T_J, T_{STG}	-55 ~ 125	°C

Note:
1. T_A = 25°C unless otherwise specified. For capacitive load, derate current by 20%.
2. C_J at V_R=1V, f= 1MHz.
3. Mounted on FR-4 board with recommended pad layout.

DIMENSIONS

SOD-123	Min. (mm)	Max. (mm)
A	0.83	1.35
A1	0.00	0.12
b	0.50	0.70
c	0.00	2.00
D	1.40	1.80
E	2.50	2.80
He	3.60	3.90
L	0.40	-
X	0.97	
X1	4.25	
Y	1.22	



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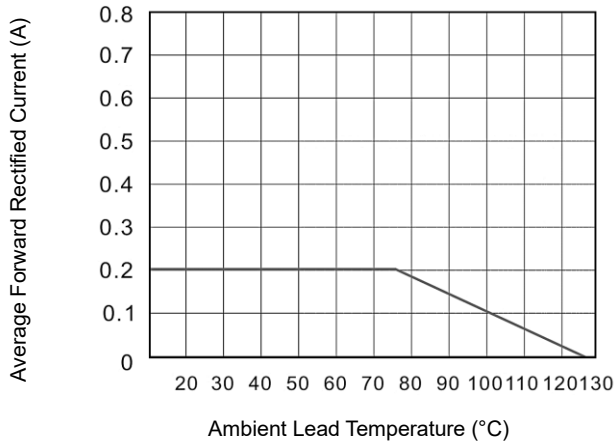
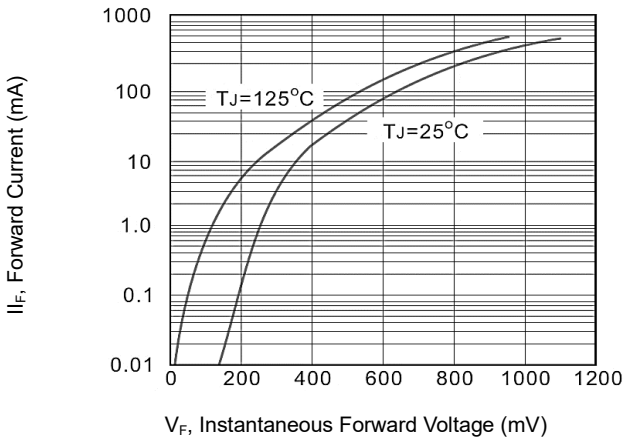
CHARACTERISTIC CURVES

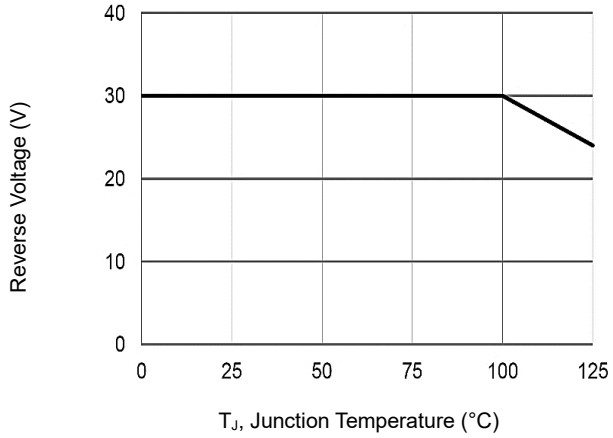
Typical Forward Current Derating Curve



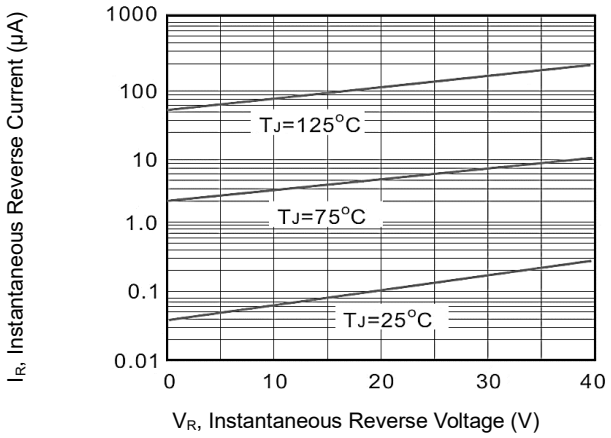
Typical Forward Characteristics



Operating Temperature Derating Curve



Typical Reverse Characteristics



Typical Junction Capacitance