

BAT42WS, BAT43WS, BAT54WS

SURFACE MOUNT SCHOTTKY BARRIER

VOLTAGE 30 Volts

CURRENT 0.2 Amperes

PACKAGE SOD-323

FEATURES

- Low turn-on voltage
- Fast switching
- PN Junction Guard Ring for Transient and ESD Protection.

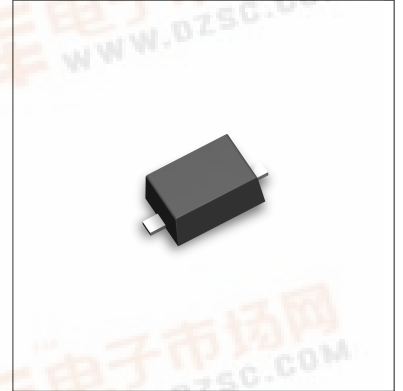
MECHANICAL DATA

Case: SOD-323, Plastic

Terminals: Solderable per MIL-STD-202, Method 208

Approx. Weight: 0.008 gram

Marking: L2, L3, L4



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

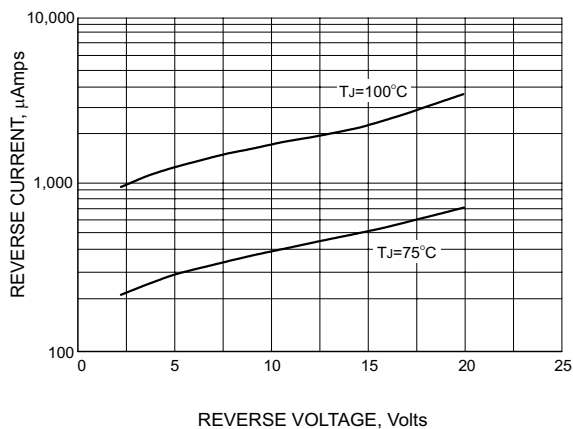
Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

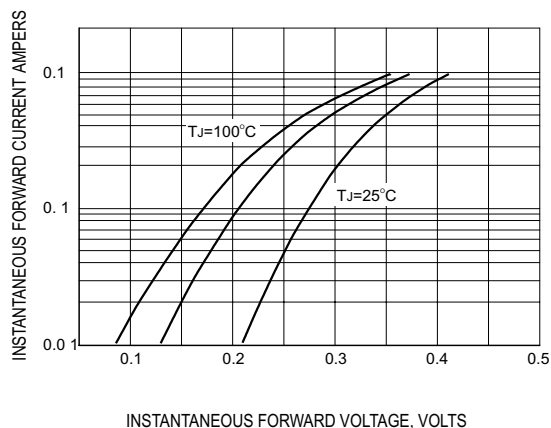
Parameter	Symbol	BAT42WS	BAT43WS	BAT54WS	Units
Peak Repetitive Reverse Voltage	V_{RRM}	30	30	30	V
Maximum Average Forward Current at $T_a=25^\circ\text{C}$	I_o	0.2	0.2	0.2	A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	4.0	4.0	0.6	A
Maximum Instantaneous Forward Voltage	V_F	0.4 @ $I_F=0.01\text{A}$ 1.0 @ $I_F=0.2\text{A}$	0.33 @ $I_F=0.002\text{A}$ 1.0 @ $I_F=0.2\text{A}$	0.32 @ $I_F=0.001\text{A}$ 1.0 @ $I_F=0.1\text{A}$	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	0.5 @ $V_R=30\text{V}$	0.5 @ $V_R=30\text{V}$	2.0 @ $V_R=25\text{V}$	μA
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	635			$^\circ\text{C} / \text{W}$
Operating Junction Temperature Range	T_J	-55 TO +125			$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 TO +125			$^\circ\text{C}$



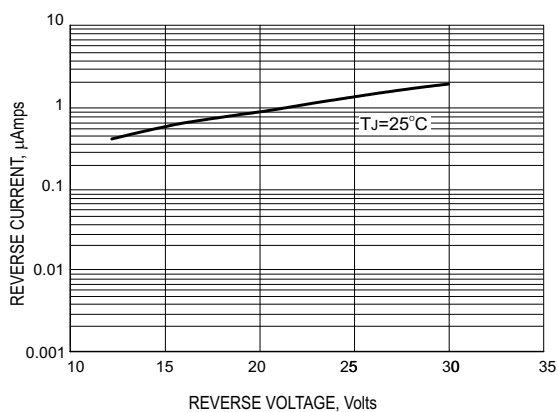
RATING and CHARACTERISTIC CURVES



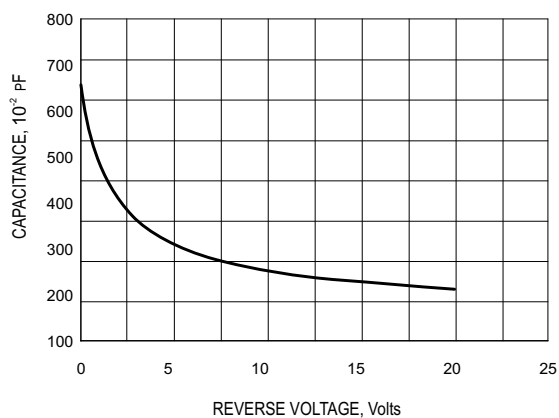
TYPICAL REVERSE CURRENT



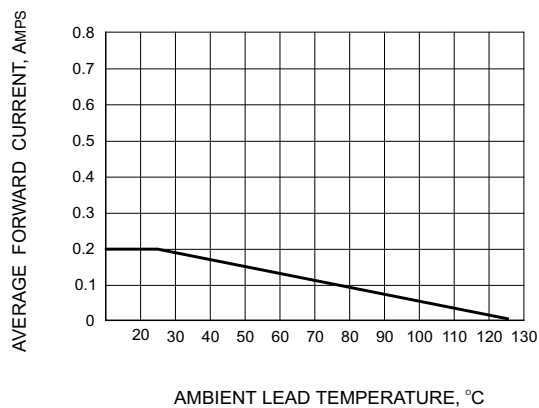
TYPICAL FORWARD VOLTAGE



TYPICAL REVERSE CURRENT



TYPICAL JUNCTION CAPACITANCE



CURRENT DERATING

SOD-323

