DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

BAT42WS
BAT43WS
BAT54WS

TECHNICAL SPECIFICATIONS OF SMALL SIGNAL SCHOTTKY BARRIER DIODES

VOLTAGE - 30 Volts *CURRENT - 0.2 Amperes*

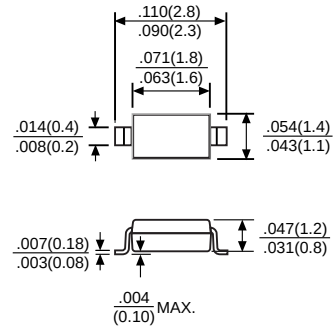
FEATURES

* For general purpose applications
* Low turn-on voltage.
* Fast switching time.
* Protected by a PN junction guard ring against excessive voltage, such as electrostatic discharge(ESD).

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Terminals: Solder plated, solderable per MIL-STD-202E, Method 208 guaranteed
* Mounting position: Any
* Weight: 0.008 grams Approx.

SOD-323



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

		SYMBOL	BAT42WS	BAT43WS	BAT54WS	UNITS
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	30			Volts
Maximum RMS Voltage		V_{RMS}	21			Volts
Maximum DC Blocking Voltage		V_{DC}	30			Volts
Maximum Average Forward Rectified Current at T_A=75°C		I_O	0.2			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	4.0		0.6	Amps
Maximum Instantaneous Forward Voltage		V_F	1.0 @ I_F=0.2A		1.0 @ I_F=0.1A	Volts
			0.4 @ I_F=0.01A	0.33 @ I_F=0.002A	0.32 @ I_F=0.001A	
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C	I_R	0.5		2.0	µAmps
	@T_A = 100°C		100		500	
Typical Thermal Resistance (Note1)		$R_{\theta JA}$	635			°C/W
Typical Junction Capacitance (Note 2)		C_J	10			pF
Storage Operating Temperature Range		T_J, T_{STG}	-55 to + 125			°C

NOTES : 1. Terminals maintained at specified ambient temperature.
2. Measured at 1 MHz and applied reverse voltage of 1.0 volts.

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RATING AND CHARACTERISTIC CURVES (BAT42WS, BAT43WS, BAT54WS)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

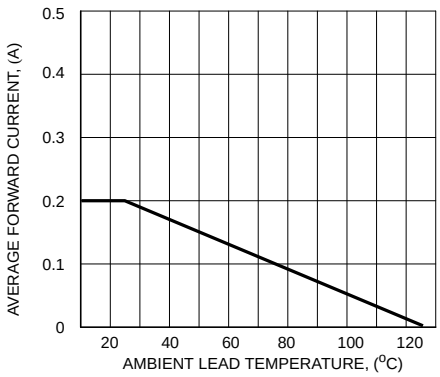

FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

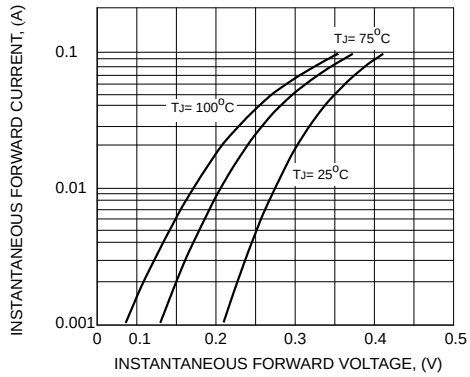

FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

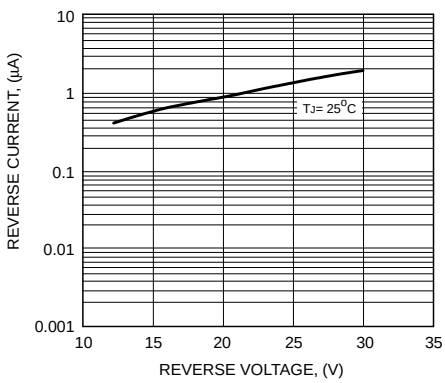

FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

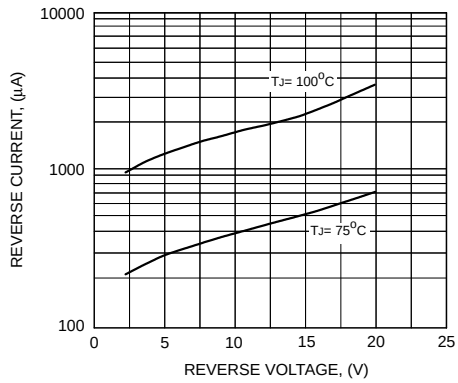

FIG. 5 - TYPICAL JUNCTION CAPACITANCE