



DC COMPONENTS CO., LTD.
RECTIFIER SPECIALISTS

BAT42
BAT43

TECHNICAL SPECIFICATIONS OF SMALL SIGNAL SCHOTTKY BARRIER DIODES
VOLTAGE - 30 Volts **CURRENT - 0.2 Amperes**

FEATURES

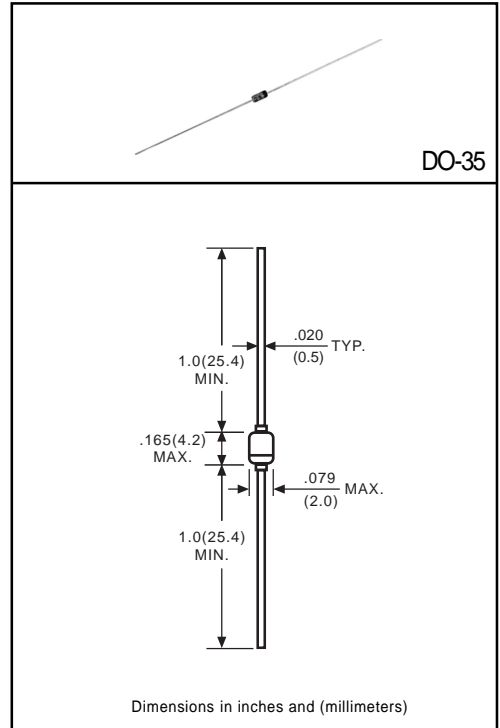
- * For general purpose applications
- * Low turn-on voltage.
- * Fast switching time.
- * Protected by a PN junction guard ring against excessive voltage, such as electrostatic discharge(ESD).

MECHANICAL DATA

- * Case: Glass sealed case
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.13 gram

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	BAT42	BAT43	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		Amps
Maximum Instantaneous Forward Voltage	V _F	1.0 @ I _F =0.2A		Volts
		0.4 @ I _F =0.01A	0.33 @ I _F =0.002A	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	@ T _A = 25°C	0.5	μAmps
		@ T _A = 100°C	100	
Typical Thermal Resistance (Note1)	R _{θJA}	300		°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. Leads maintained at specified ambient temperature at a distance of 4.0mm from case.
2. Measured at 1 MHz and applied reverse voltage of 1.0 volts.

RATING AND CHARACTERISTIC CURVES (BAT42 AND BAT43)

FIG. 1 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS AT DIFFERENT TEMPERATURES

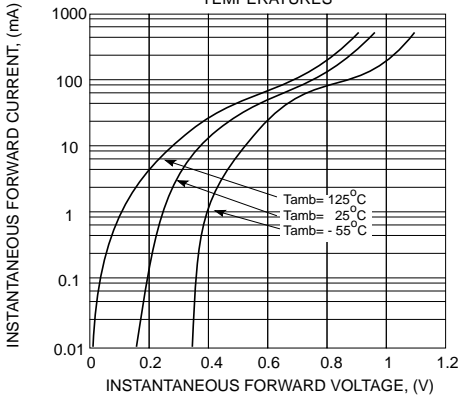


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

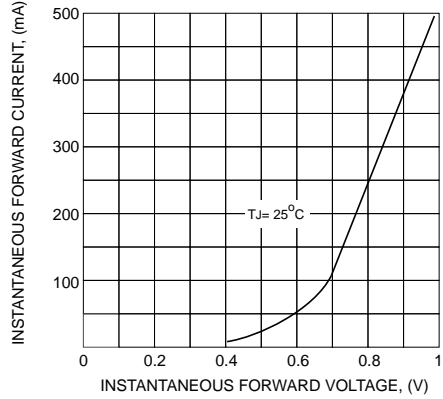


FIG. 3 - TYPICAL REVERSE CURRENT VERSUS AMBIENT TEMPERATURE

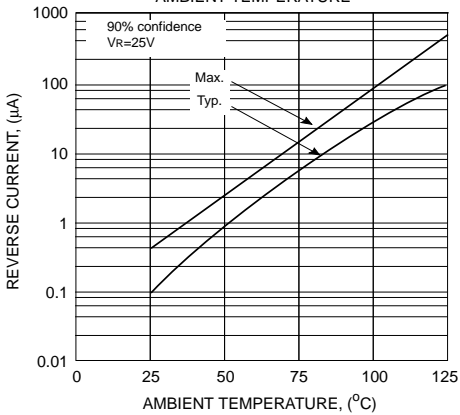


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

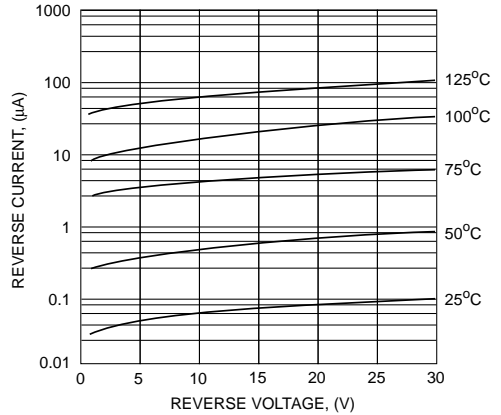
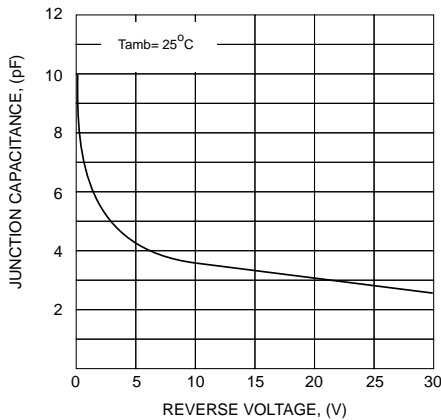


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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