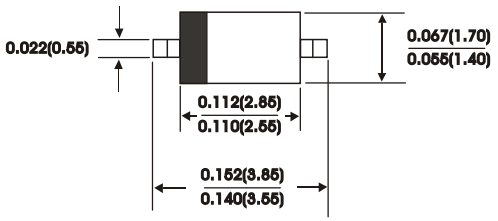
BAT42 THRU BAT43

SURFACE MOUNT SCHOTTKY DIODES

SOD-123

FEATURES:

- Low Forward Voltage drop
- Fast general purpose applications
- These diodes feature very low trun-on voltage and switing. These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges.
- These diodes are also available in the DO-35 case with the type designation BAT42 to BAT43



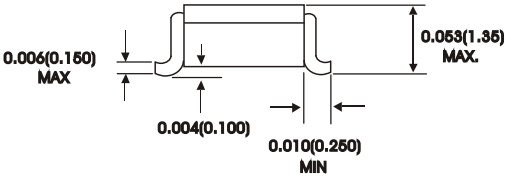
MECHANICAL DATA

Case : SOD-123 Glass case

Polarity : Cathode band

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

Weight : 0.13 grams



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Characteristic	Symbol	BAT42	BAT43	Units
Maximum recurrent peak reverse voltage	V_{RRM}	30	30	Volts
Forward continuous current at Ta=25℃	I_F	0.2[1)]		Amps
Surge forward current at tp<10ms.Tamb=25℃	I_{FSM}	4[1)]		Amps
Power dissipation at Tamb=25℃	Ptot	200[1)]		mW
Minxmum Reverse breakdown tested at IBR=100uA	$V_{(BR)R}$	30		Volts
Maximum instantaneous forward voltage — Both Typts IF=200mA	V_F	1.0		Volts
IF=10mA		0.40		
IF=50mA		0.65		
IF=2mA			0.33	
IF=15mA			0.45	
Maximum leakage current at V_R=25V — Ta=25℃	I_R	0.5		μA
Ta=100℃		100		
Total capacitance at V_R=1V,f=1MHZ	Ctot	7		P_F
Maximum reverse recovery time from IF=IR=0.01A,IRR=1mA,RL=100	T_{RR}	5.0		nS
Ambient operating temperature range	Tamb	-65to+125		℃
Storage temperature range	Tstg	-65to+150		℃

NOTES:
(1) Valid provided that leads at a distance of 4mm from the case are kept at ambient temperature

FIG.1-ADMISSIBLE POWER DISSIPATION

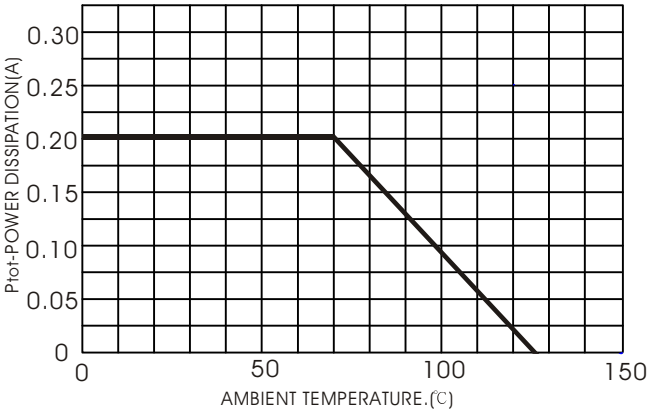


FIG.2-TYPICAL FORWARD CHARACTERISTICS

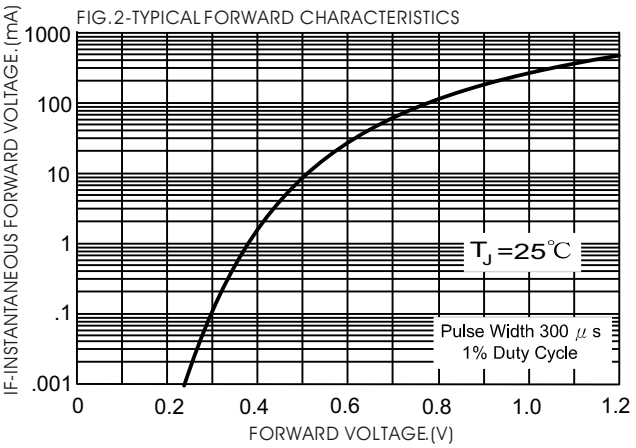


FIG.3-TYPICAL REVERSE CHARACTERISTIC

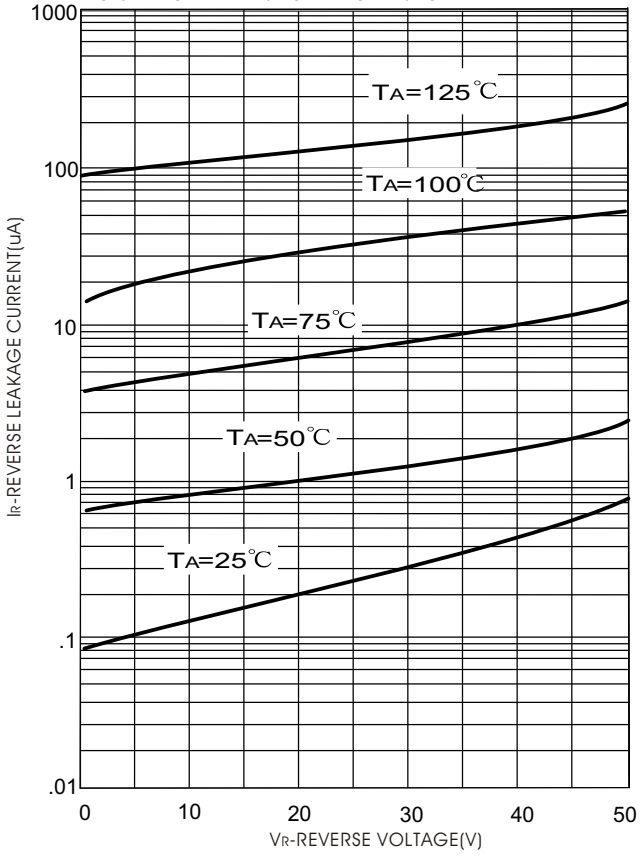


FIG.4-TYPICAL CAPACITANCE