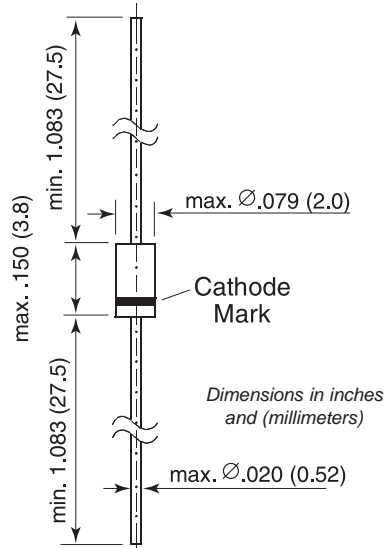




Schottky Diodes

DO-35 Glass



Features

- For general purpose applications
- These diodes feature very low turn-on voltage and fast switching. These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges
- These diodes are also available in the SOD-123 case with the type designations BAT42W to BAT43W and in designations LL42 to LL43.

Mechanical Data

Case: DO-35 Glass Case

Weight: approx. 0.13g

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V _{RRM}	30	V
Forward Continuous Current at T _{amb} = 25°C	I _F	200 ⁽¹⁾	mA
Repetitive Peak Forward Current at t _p < 1s, δ < 0.5, T _{amb} = 25°C	I _{FRM}	500 ⁽¹⁾	mA
Surge Forward Current at t _p < 10ms, T _{amb} = 25°C	I _{FSM}	4 ⁽¹⁾	A
Power Dissipation ⁽¹⁾ at T _{amb} = 65°C	P _{tot}	200 ⁽¹⁾	mW
Thermal Resistance Junction to Ambient Air	R _{θJA}	300 ⁽¹⁾	°C/W
Junction Temperature	T _j	125	°C
Ambient Operating Temperature Range	T _{amb}	-65 to +125	°C
Storage Temperature Range	T _s	-65 to +150	°C

Electrical Characteristics (T_J = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	V _{(BR)R}	I _R = 100μA (pulsed)	30	—	—	V
Leakage Current Pulse Test t _p < 300μs, δ < 2%	I _R	V _R = 25V V _R = 25V, T _j = 100°C	—	—	0.5 100	μA
Forward Voltage Pulse Test t _p < 300μs, δ < 2%	V _F	BAT42, 43 BAT42 BAT43 BAT43 BAT43 I _F = 200mA I _F = 10mA I _F = 50mA I _F = 2mA I _F = 15mA	— — — 0.26 —	— — — — —	1 0.4 0.65 0.33 0.45	V
Capacitance	C _{tot}	V _R = 1V, f = 1MHz	—	7	—	pF
Reverse Recovery Time	t _{rr}	I _F = 10mA, I _R = 10mA I _{rr} = 1mA, R _L = 100Ω	—	—	5	ns
Detection Efficiency	η _v	R _L = 15KΩ, C _L = 300pF f = 45MHz, V _{RF} = 2V	80	—	—	%

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



Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Admissible Power Dissipation vs. Ambient Temperature

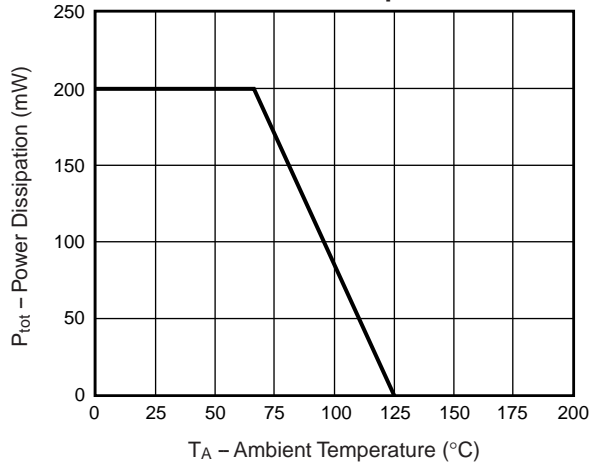


Fig. 2 – Typical Reverse Characteristics

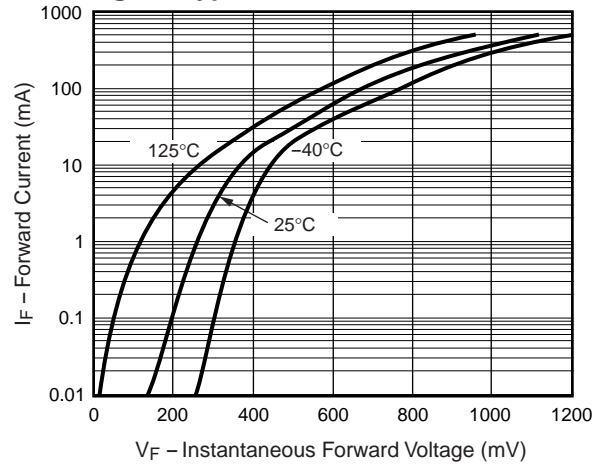


Fig. 3 – Typical Reverse Characteristics

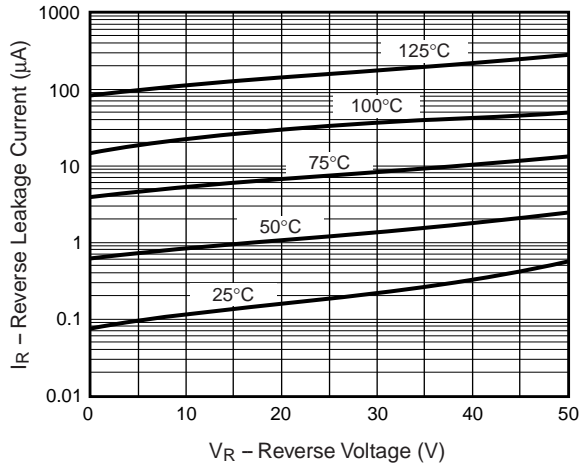


Fig. 4 – Typical Capacitance vs. Reverse Applied Voltage

