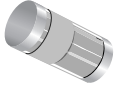
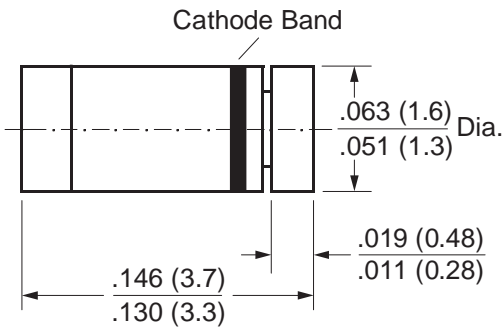


## Schottky Diodes



### MiniMELF (SOD-80C)



Dimensions in inches and (millimeters)

### 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 DO-35 case with type designations BAT42 to BAT43 and in the SOD-123 case with type designations BAT42W to BAT43W.

### Mechanical Data

**Case:** MiniMELF Glass Case (SOD-80C)

**Weight:** approx. 0.05g

**Cathode Band Color:** Green

**Packaging Codes/Options:**

D1/10K per 13" reel (8mm tape), 20K/box

D2/2.5K per 7" reel (8mm tape), 20K/box

### 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 $T_{amb} = 25^{\circ}\text{C}$	$I_F$	200 <sup>(1)</sup>	mA
Repetitive Peak Forward Current at $t_p < 1\text{s}$ , $\delta < 0.5$ , $T_{amb} = 25^{\circ}\text{C}$	$I_{FRM}$	500 <sup>(1)</sup>	mA
Surge Forward Current at $t_p < 10\text{ms}$ , $T_{amb} = 25^{\circ}\text{C}$	$I_{FSM}$	4 <sup>(1)</sup>	A
Power Dissipation at $T_{amb} = 65^{\circ}\text{C}$	$P_{tot}$	200 <sup>(1)</sup>	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	300 <sup>(1)</sup>	$^{\circ}\text{C}/\text{W}$
Junction Temperature	$T_j$	125	$^{\circ}\text{C}$
Ambient Operating Temperature Range	$T_{amb}$	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	$T_s$	-65 to +150	$^{\circ}\text{C}$

**Note:** (1) Valid provided that electrodes are kept at ambient temperature



## Electrical Characteristics (T<sub>J</sub> = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	V <sub>(BR)R</sub>	100μA pulses	30	—	—	V
Leakage Current Pulse Test t <sub>p</sub> = 300μs, δ < 2%	I <sub>R</sub>	V <sub>R</sub> = 25V V <sub>R</sub> = 25V, T <sub>j</sub> = 100°C	—	—	0.5 100	μA
Forward Voltage Pulse Test t <sub>p</sub> < 300μs, δ < 2%	LL42 LL42 LL43 LL43	V <sub>F</sub> I <sub>F</sub> = 200mA I <sub>F</sub> = 10mA I <sub>F</sub> = 50mA I <sub>F</sub> = 2mA I <sub>F</sub> = 15mA	— — — 0.26 —	— — — — —	1 0.4 0.65 0.33 0.45	V
Capacitance	C <sub>tot</sub>	V <sub>R</sub> = 1V, f = 1MHz	—	7	—	pF
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = 10mA, I <sub>R</sub> = 10mA, to I <sub>R</sub> = 1mA, R <sub>L</sub> = 100Ω	—	—	5	ns
Rectification Efficiency	η <sub>v</sub>	R <sub>L</sub> = 15KΩ, C <sub>L</sub> = 300pF, f = 45MHz, V <sub>RF</sub> = 2V	80	—	—	%