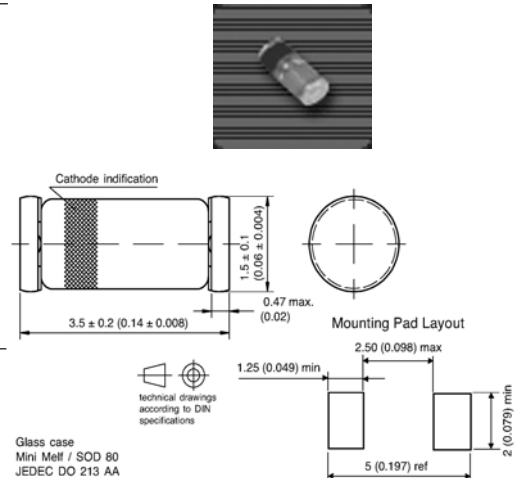


Features

- ◆ 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
- ◆ This diode is also available in the DO-35 case with type designation BAT42 to BAT43.

Mechanical Data

- ◆ Case: MiniMELF Glass Case (SOD-80)
- ◆ Weight: approx. 0.05g
- ◆ Cathode Band Color: Green



Maximum Ratings and Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	30	Volts
Forward continuous current at $T_{amb}=25^{\circ}\text{C}$	I_F	200 ⁽¹⁾	mA
Repetitive peak forward current at $t_c < 1\text{s}$, $\delta < 0.5$, $T_{amb}=25^{\circ}\text{C}$	I_{FRM}	500 ⁽¹⁾	mA
Surge forward current at $t_p < 10\text{ms}$, $T_{amb}=25^{\circ}\text{C}$	I_{FSM}	4 ⁽¹⁾	Amps
Power dissipation at $T_{amb}=65^{\circ}\text{C}$	P_{tot}	200 ⁽¹⁾	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	0.3 ⁽¹⁾	°C/mW
Junction temperature	T_J	125	°C
Ambient operating temperature range	T_{amb}	-55 to +125	°C
Storage temperature range	T_S	-65 to +150	°C

Notes: 1. Valid provided that electrodes are kept at ambient temperature.

Electrical Characteristics

($T_j=25^\circ\text{C}$ unless otherwise noted.)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	$V_{(BR)R}$	100 μA (pulsed)	30	-	-	Volts
Leakage current pulse test $t_p < 300\mu\text{s}$, $\delta < 2\%$	I_R	$V_R = 25\text{V}$ $V_R = 25\text{V}$, $T_j = 100^\circ\text{C}$	-	-	0.5 100	μA
Forward voltage LL42 LL42 LL43 LL43 pulse test $t_p < 300\mu\text{s}$, $\delta < 2\%$	V_F	$I_F = 200\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 2\text{mA}$ $I_F = 15\text{mA}$	- - - 0.26 -	- - - - -	1.0 0.40 0.65 0.33 0.45	Volt
Capacitance	C_{tot}	$V_R = 1\text{V}$, $f = 1\text{MHz}$	-	7	-	pF
Reverse recovery time	t_{rr}	$I_F = 10\text{mA}$, $I_R = 10\text{mA}$, to $I_R = 1\text{mA}$, $R_L = 100\Omega$	-	-	5	ns
Rectification efficiency	η_v	$R_L = 15\text{K}\Omega$, $C_L = 300\text{pF}$ $f = 45\text{MHz}$, $V_{RF} = 2\text{V}$	80	-	-	%