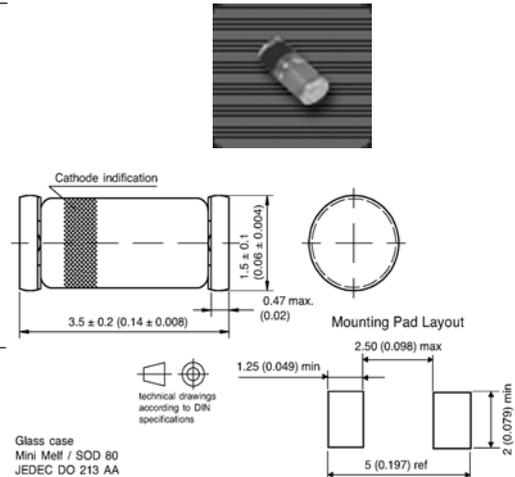


## Features

- ◆ 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 <sup>(1)</sup>	mA
Repetitive peak forward current at $t_c < 1\text{s}$ , $\delta < 0.5$ , $T_{amb}=25^{\circ}\text{C}$	$I_{FRM}$	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>	Amps
Power dissipation at $T_{amb}=65^{\circ}\text{C}$	$P_{tot}$	200 <sup>(1)</sup>	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	0.3 <sup>(1)</sup>	$^{\circ}\text{C}/\text{mW}$
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	$^{\circ}\text{C}$

**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 $\mu\text{A}$ (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	$\mu\text{A}$
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	$C_{\text{tot}}$	$V_R=1\text{V}$ , $f=1\text{MHz}$	-	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	$\eta_v$	$R_L=15\text{k}\Omega$ , $C_L=300\text{pF}$ $f=45\text{MHz}$ , $V_{RF}=2\text{V}$	80	-	-	%