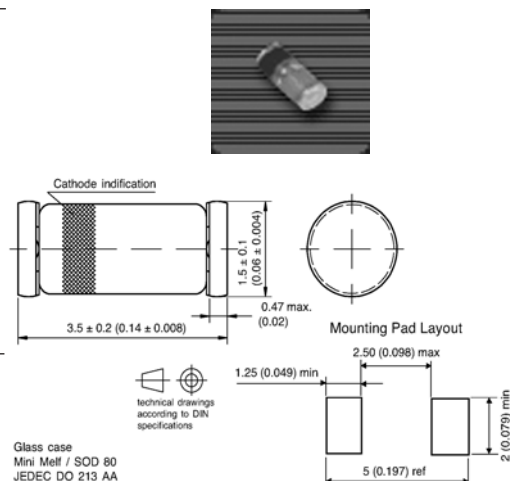


Features

- ◆ 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 $T_{amb}=25^{\circ}C$	I_F	200 ⁽¹⁾	mA
Repetitive peak forward current at $t_c < 1s$, $\delta < 0.5$, $T_{amb}=25^{\circ}C$	I_{FRM}	500 ⁽¹⁾	mA
Surge forward current at $t_p < 10ms$, $T_{amb}=25^{\circ}C$	I_{FSM}	4 ⁽¹⁾	Amps
Power dissipation at $T_{amb}=65^{\circ}C$	P_{tot}	200 ⁽¹⁾	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	0.3 ⁽¹⁾	$^{\circ}C/mW$
Junction temperature	T_j	125	$^{\circ}C$
Ambient operating temperature range	T_{amb}	-55 to +125	$^{\circ}C$
Storage temperature range	T_s	-65 to +150	$^{\circ}C$

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	I_R	$V_R=25\text{V}$	-	-	0.5	μA
pulse test $t_p<300\mu\text{s}$, $\delta<2\%$		$V_R=25\text{V}$, $T_J=100^{\circ}\text{C}$	-	-	100	
Forward voltage	V_F	$I_F=200\text{mA}$	-	-	1.0	Volt
LL42		$I_F=10\text{mA}$	-	-	0.40	
LL42		$I_F=50\text{mA}$	-	-	0.65	
pulse test $t_p<300\mu\text{s}$, $\delta<2\%$		$I_F=2\text{mA}$	0.26	-	0.33	
LL43		$I_F=15\text{mA}$	-	-	0.45	
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	$R_L=15\text{K}\Omega$, $C_L=300\text{pF}$ $f=45\text{MHz}$, $V_{RE}=2\text{V}$	80	-	-	%