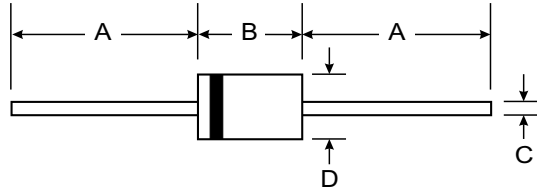


### Features

- Low Forward Voltage Drop
- Fast Switching Speeds
- Guard Ring Construction for Transient Protection
- Surface Mount Versions Available (LL42 / LL43)



### Mechanical Data

- Case: DO-35, Plastic
- Leads: Solderable per MIL-STD-202, Method 208
- Marking: Type Number
- Polarity: Cathode Band
- Weight: 0.13 grams (approx.)

DO-35		
Dim	Min	Max
A	25.40	—
B	—	4.00
C	—	0.60
D	—	2.00
All Dimensions in mm		

### Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	BAT42	BAT43	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	30		V
Working Peak Reverse Voltage	$V_{RWM}$			
DC Blocking Voltage	$V_R$			
RMS Reverse Voltage	$V_{R(RMS)}$	21		V
Forward Continuous Current (Note 1)	$I_{FM}$	200		mA
Repetitive Peak Forward Current (Note 1) @ $t < 1.0\text{s}$ Duty Cycle $< 50\%$	$I_{FRM}$	500		mA
Non-Repetitive Peak Forward Surge Current @ $t = 10\text{ms}$	$I_{FSM}$	4.0		A
Power Dissipation (Note 1)	$P_d$	200		mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	500		K/W
Operating and Storage Temperature Range	$T_j, T_{STG}$	-55 to +125		$^\circ\text{C}$

### Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	30	—	—	V	$I_{RS} = 100\mu\text{A}$ Pulses
Maximum Forward Voltage Drop (Note 2)	$V_{FM}$	—	—	1.00 0.40 0.65 0.33 0.45	V	$I_F = 200\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 2.0\text{mA}$ $I_F = 15\text{mA}$
Maximum Peak Reverse Current (Note 2)	$I_{RM}$	—	—	0.50 100	$\mu\text{A}$	$V_R = 25\text{V}$ $V_R = 25\text{V}, T_j = 100^\circ\text{C}$
Junction Capacitance	$C_j$	—	10	—	pF	$V_R = 1.0\text{V}, f = 1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	—	—	5.0	ns	$I_F = I_R = 10\text{mA}$ , $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$
Rectification Efficiency	$\eta_V$	80	—	—	%	$R_L = 100\Omega, C_L = 300\text{pF}$ , $f = 45\text{MHz}, V_{RF} = 2.0\text{V}$

- Notes:
1. Valid provided that leads are kept at ambient temperature.
  2.  $t < 300\mu\text{s}$ , Duty Cycle  $< 2\%$ .