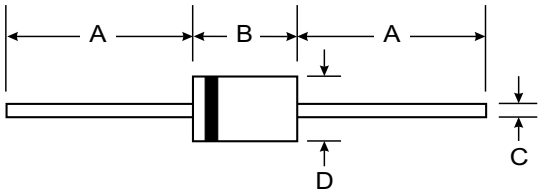
BAT42 / BAT43

SCHOTTKY BARRIER SWITCHING DIODE

Features

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



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

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.)

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	BAT42	BAT43	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30		V
RMS Reverse Voltage	$V_{R(RMS)}$	21		V
Forward Continuous Current (Note 1)	I_{FM}	200		mA
Repetitive Peak Forward Current (Note 1) @ t < 1.0s Duty Cycle < 50%	I_{FRM}	500		mA
Non-Repetitive Peak Forward Surge Current @ t = 10ms	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		°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	30	—	—	V	I_{RS} = 100μA Pulses
Maximum Forward Voltage Drop (Note 2) All Types BAT42 BAT42 BAT43 BAT43	V_{FM}	— — — 0.26 —	—	1.00 0.40 0.65 0.33 0.45	V	I_F = 200mA I_F = 10mA I_F = 50mA I_F = 2.0mA I_F = 15mA
Maximum Peak Reverse Current (Note 2)	I_{RM}	—	—	0.50 100	μA	V_R = 25V V_R = 25V, Tj = 100°C
Junction Capacitance	C_j	—	10	—	pF	V_R = 1.0V, f = 1.0MHz
Reverse Recovery Time	t_{rr}	—	—	5.0	ns	I_F = I_R = 10mA, I_{rr} = 0.1 x I_R, R_L = 100Ω
Rectification Efficiency	ηv	80	—	—	%	R_L = 100Ω, C_L = 300pF, f = 45MHz, V_{RF} = 2.0V

Notes: 1. Valid provided that leads are kept at ambient temperature.
2. t < 300μs, Duty Cycle < 2%.