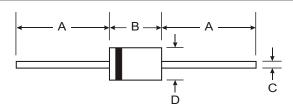
BAT42 / BAT43



SCHOTTKY BARRIER SWITCHING DIODE

Features

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



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				
Α	25.40	_				
В	_	4.00				
С	_	0.60				
D	_	2.00				
All Dimensions in mm						

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	BAT42	BAT43	Unit
Peak Repetitive Reverse Voltage	V_{RRM}			
Working Peak Reverse Voltage	V_{RWM}	30		V
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 < 1.0s Duty Cycle < 50%	I _{FRM}	500		mA
Non-Repetitive Peak Forward Surge Current @ t = 10ms	I _{FSM}	4	.0	Α
Power Dissipation (Note 1)	P_d	20	00	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{ hetaJA}$	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	Тур	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	IF = 200mA IF = 10mA IF = 50mA IF = 2.0mA IF = 15mA
Maximum Peak Reverse Current (Note 2)		I _{RM}	_	_	0.50 100	μΑ	V _R = 25V V _R = 25V, Tj = 100°C
Junction Capacitance		Cj	_	10	_	pF	V _R = 1.0V, f = 1.0MHz
Reverse Recovery Time		t _{rr}	_	_	5.0	ns	$I_F = I_R = 10 \text{mA},$ $I_{rr} = 0.1 \text{ x } I_R, R_L = 100 \Omega$
Rectification Efficiency		ην	80	_	_	%	$R_L = 100\Omega, C_L = 300pF,$ $f = 45MHz, V_{RF} = 2.0V$

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

2. $t < 300\mu s$, Duty Cycle < 2%.