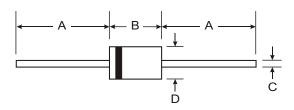
# **BAT42 / BAT43**



### 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 NumberPolarity: 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<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	BAT42	BAT43	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$			
Working Peak Reverse Voltage	$V_{RWM}$	3	0	V
DC Blocking Voltage	$V_{R}$			
RMS Reverse Voltage	$V_{R(RMS)}$	21		V
Forward Continuous Current (Note 1)	I <sub>FM</sub>	200		mA
Repetitive Peak Forward Current (Note 1) @ t < 1.0s Duty Cycle < 50%	I <sub>FRM</sub>	500		mA
Non-Repetitive Peak Forward Surge Current @ t = 10ms	I <sub>FSM</sub>	4	.0	Α
Power Dissipation (Note 1)	$P_d$	20	00	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{ hetaJA}$	50	00	K/W
Operating and Storage Temperature Range	$T_j$ , $T_{STG}$	-55 to	+125	°C

### Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic		Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage		V <sub>(BR)R</sub>	30	_	_	V	I <sub>RS</sub> = 100μA Pulses
Maximum Forward Voltage Drop (Note 2)	All Types BAT42 BAT42 BAT43 BAT43	V <sub>FM</sub>	  0.26 	_	1.00 0.40 0.65 0.33 0.45	V	I <sub>F</sub> = 200mA I <sub>F</sub> = 10mA I <sub>F</sub> = 50mA I <sub>F</sub> = 2.0mA I <sub>F</sub> = 15mA
Maximum Peak Reverse Current (Note 2)		I <sub>RM</sub>	_	_	0.50 100	μΑ	V <sub>R</sub> = 25V V <sub>R</sub> = 25V, Tj = 100°C
Junction Capacitance		Cj	_	10	_	pF	V <sub>R</sub> = 1.0V, f = 1.0MHz
Reverse Recovery Time		t <sub>rr</sub>	_	_	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		_	%	$R_L = 100\Omega$ , $C_L = 300pF$ , $f = 45MHz$ , $V_{RF} = 2.0V$

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

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

This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.