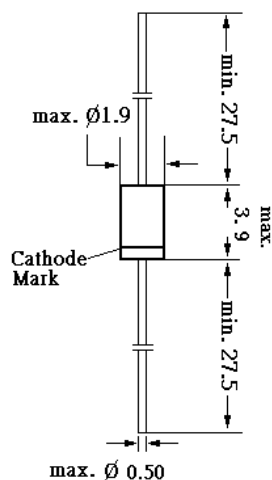


SCHOTTKY DIODES

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
- These diodes are also available in the SOD-123 case with the type designations BAT42W to BAT43W and in designations LL42 to LL43.



Glass case JEDEC DO-35

Dimensions in mm

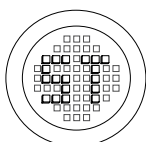
Mechanical Data

- Case: DO-35 Glass Case

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
Repetitive peak reverse voltage	V_{RRM}	30	V
Forward continuous current at $T_{amb} = 25^\circ\text{C}$	I_F	200 ⁽¹⁾	mA
Repetitive peak forward current at $t_p < 1.5\text{s}$, $\delta < 0.5$, $T_{amb} = 25^\circ\text{C}$	I_{FRM}	500 ⁽¹⁾	mA
Surge forward current at $t_p < 10\text{ms}$, $T_{amb} = 25^\circ\text{C}$	I_{FSM}	4 ⁽¹⁾	A
Power dissipation ⁽¹⁾ at $T_{amb} = 65^\circ\text{C}$	P_{tot}	200 ⁽¹⁾	mW
Operating ambient temperature	T_{amb}	-65 to +125	$^\circ\text{C}$
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_s	-65 to +150	$^\circ\text{C}$
Thermal resistance from junction to ambient air	$R_{\theta JA}$	300 ⁽¹⁾	$^\circ\text{C/W}$

Note: (1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature.



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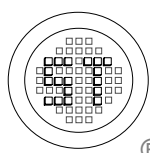
РАДИОТЕХ-ТРЕЙД

Тел.: (495) 795-0805
 Факс: (495) 234-1603
 Эл. почта: info@rct.ru
 Веб: www.rct.ru

BAT42, BAT43

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit	
Forward voltage pulse test $t_p < 300\mu\text{s}$, $\delta < 2\%$						
at $I_F = 200\text{mA}$	BAT42, 43	V_F	-	-	1000	mV
at $I_F = 10\text{mA}$	BAT42	V_F	-	-	400	mV
at $I_F = 50\text{mA}$	BAT43	V_F	-	-	650	mV
at $I_F = 2\text{mA}$	BAT43	V_F	260	-	330	mV
at $I_F = 15\text{mA}$	BAT43	V_F	-	-	450	mV
Leakage current pulse test $t_p < 300\mu\text{s}$, $\delta < 2\%$						
at $V_R = 25\text{V}$		I_R	-	-	2	μA
at $V_R = 25\text{V}$, $T_j = 100^\circ\text{C}$		I_R	-	-	100	μA
Reverse breakdown voltage at $I_R = 100\mu\text{A}$ (pulsed)	$V_{(BR)R}$	30	-	-	V	
Diode capacitance at $V_R = 1\text{V}$, $f = 1\text{MHz}$	C_{tot}	-	7	-	pF	
Reverse recovery time at $I_F = 10\text{mA}$, $I_R = 10\text{mA}$, $I_{rr} = 1\text{mA}$, $R_L = 100\Omega$	t_{rr}	-	-	5	ns	
Detection efficiency at $R_L = 15\text{K}\Omega$, $C_L = 300\text{pF}$ $f = 45\text{MHz}$, $V_{RF} = 2\text{V}$	η_v	80	-	-	%	



SEMTECH ELECTRONICS LTD.

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001
Certificate No. 7116



ISO 9001 : 2000
Certificate No. 550-1559-04-002-04

Dated : 02/08/2005

BAT42, BAT43

Ratings and Characteristic Curves ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Fig.1-Admissible Power Dissipation vs.Ambient Temperature

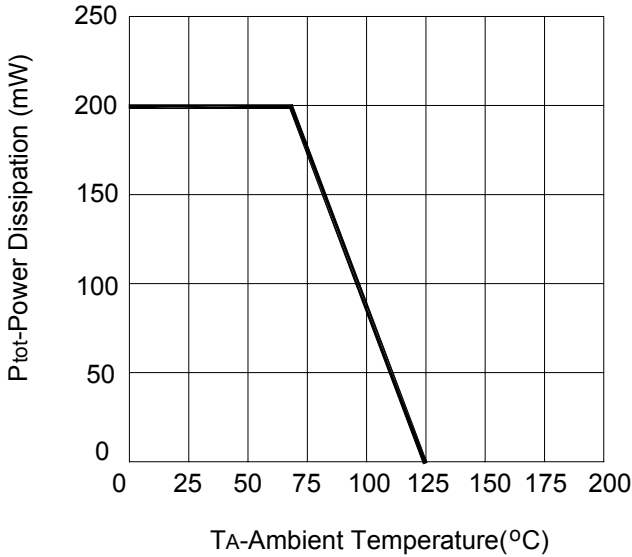


Fig.2-Typical Reverse Characteristics

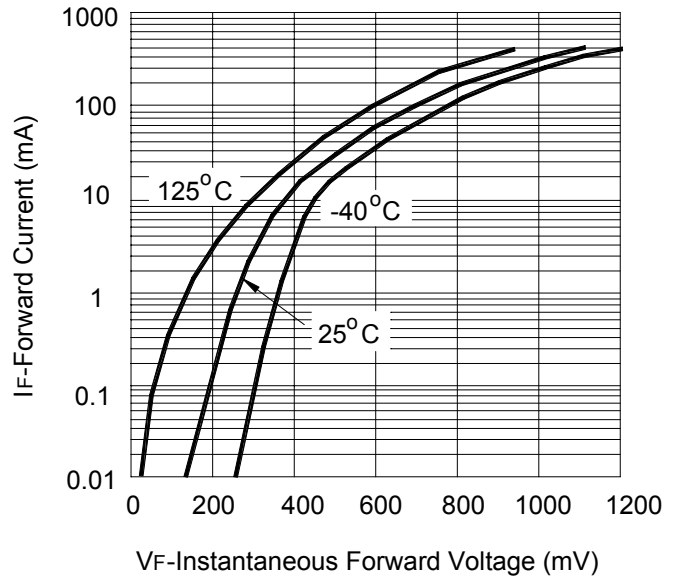


Fig.3-Typical Reverse Characteristics

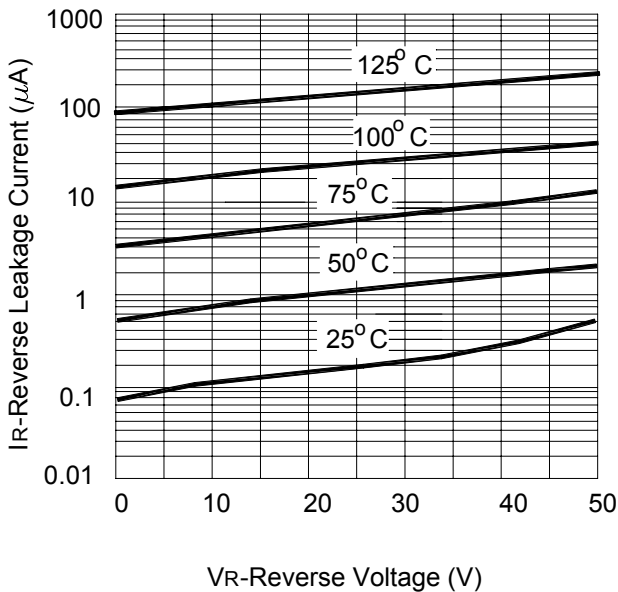
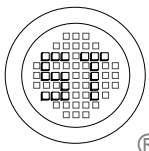
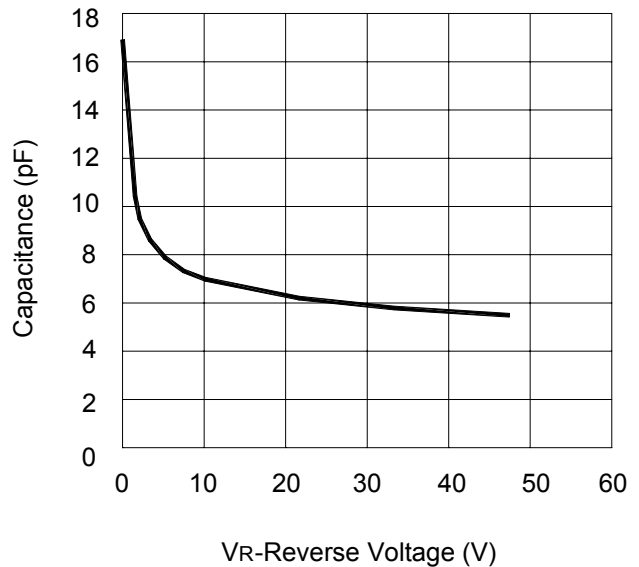
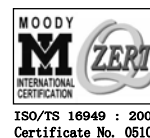


Fig.4-Typical Capacitance vs. Reverse Applied Voltage



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Dated : 02/08/2005