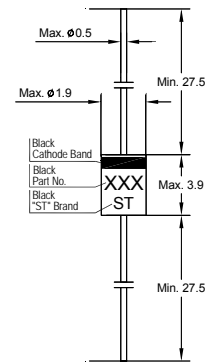


BAT42, BAT43

SCHOTTKY BARRIER DIODES

for general purpose applications



Glass Case DO-35
Dimensions in mm

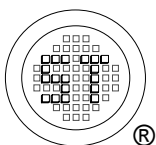
Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Forward Continuous Current	I_F	200 ¹⁾	mA
Repetitive Peak Forward Current (at $t_p < 1\text{ s}$)	I_{FRM}	500 ¹⁾	mA
Surge Forward Current (at $t_p < 10\text{ ms}$)	I_{FSM}	4 ¹⁾	A
Power Dissipation ¹⁾ at $T_{amb} = 65\text{ }^\circ\text{C}$	P_{tot}	200 ¹⁾	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	0.3 ¹⁾	K/mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Ambient Operating Temperature Range	T_{amb}	- 65 to + 125	$^\circ\text{C}$
Storage Temperature Range	T_s	- 65 to + 150	$^\circ\text{C}$

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

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage at $I_F = 200\text{ mA}$	V_F	-	-	1000	mV
at $I_F = 10\text{ mA}$	V_F	-	-	400	mV
at $I_F = 50\text{ mA}$	V_F	-	-	650	mV
at $I_F = 2\text{ mA}$	V_F	260	-	330	mV
at $I_F = 15\text{ mA}$	V_F	-	-	450	mV
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	30	-	-	V
Reverse Leakage Current at $V_R = 25\text{ V}$	I_R	-	-	0.5	μA
Diode Capacitance at $V_R = 1\text{ V}$, $f = 1\text{ MHz}$	C_{tot}	-	7	-	pF
Reverse Recovery Time from $I_F = 10\text{ mA}$ through $I_R = 10\text{ mA}$ to $I_R = 1\text{ mA}$, $R_L = 100\text{ }\Omega$	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 Sino-Tech International Holdings Limited, a company
listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
Certificate No. 05103

ISO 14001:2004
Certificate No. 7116

ISO 9001:2000
Certificate No. 0506088

Dated : 20/06/2007

BAT42, BAT43

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

Fig.1-Admissible Power Dissipation vs.Ambient Temperature

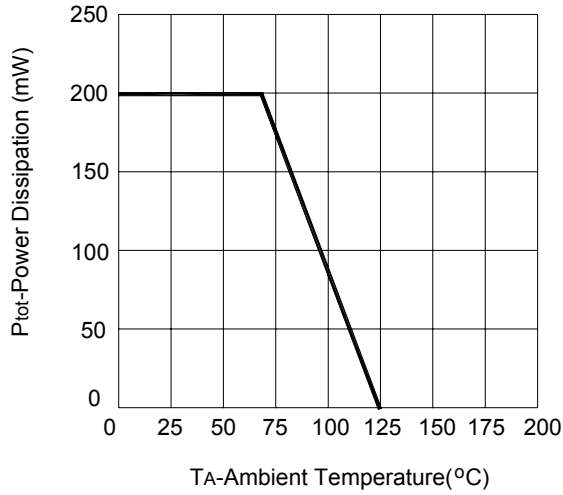


Fig.2-Typical Reverse Characteristics

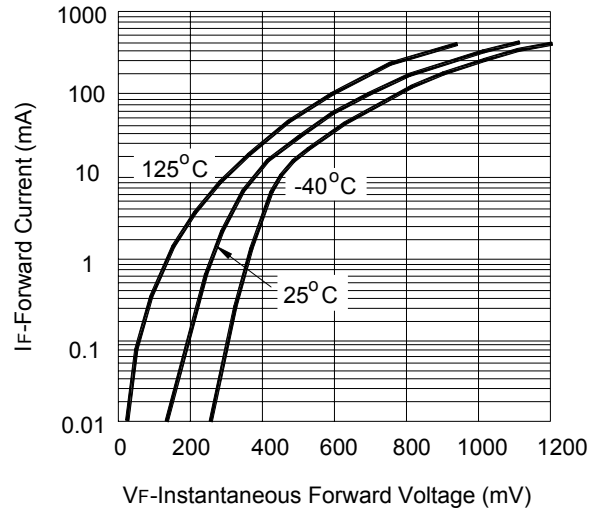


Fig.3-Typical Reverse Characteristics

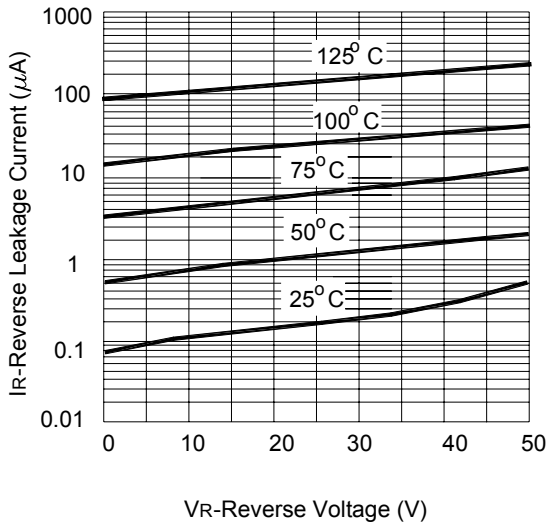
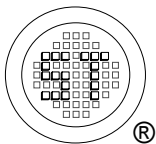
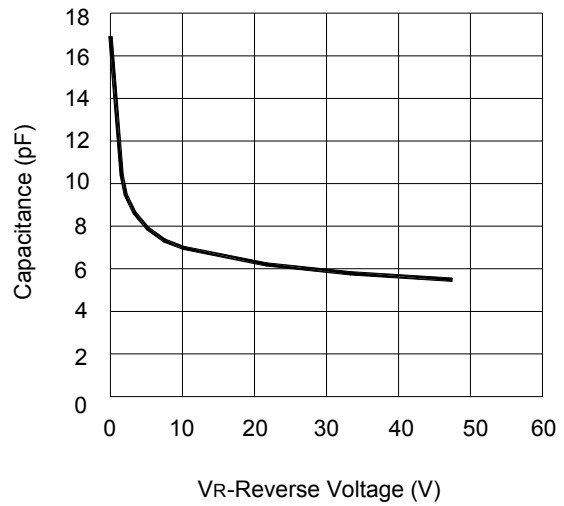


Fig.4-Typical Capacitance vs. Reverse Applied Voltage



SEMTECH ELECTRONICS LTD.

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



ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 7116



ISO 9001:2000
Certificate No. 0506088

Dated : 20/06/2007