



SEMICONDUCTOR

BAT41

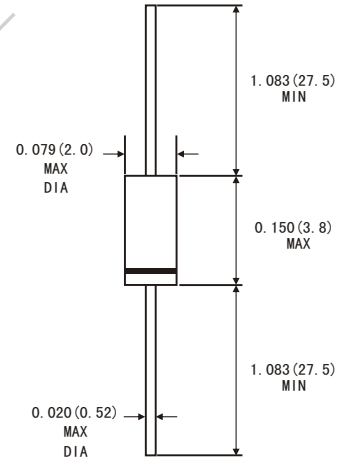
SMALL SIGNAL SCHOTTKY DIODES

FEATURES

- For general purpose applications
- This diode features very low turn-on voltage and high breakdown voltage.
- These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges.
- The diode is also available in the MinMELF case with type designation LL41.
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



DO-35



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: DO-35 glass case
- Polarity: color band denotes cathode end
- Weight: Approx. 0.13 gram

ABSOLUTE RATINGS(LIMITING VALUES)

	Symbols	Value	Units
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Forward Continuous Current at $T_A=25^\circ\text{C}$	I_F	100 ¹⁾	mA
Repetitive Peak Forward Current at $t_p < 1\text{s}, \delta < 0.5$ $T_A=25^\circ\text{C}$	I_{FRM}	350 ¹⁾	mA
Surge Forward Current at $t_p < 10\text{ms}$, $T_A=25^\circ\text{C}$	I_{FSM}	750 ¹⁾	mA
Power Dissipation at $T_A=65^\circ\text{C}$	P_{tot}	400 ¹⁾	mW
Junction Temperature	T_J	125	$^\circ\text{C}$
Ambient Operating Temperature Range	T_A	-65 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^\circ\text{C}$

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

ELECTRICAL CHARACTERISTICS

	Symbols	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage Tested with 100 μA /300 μs Pulses	$V_{(BR)R}$	100	110		V
Forward voltage Pulse Test $t_p < 300\mu\text{s}$ at $I_F=1\text{mA}$ $I_F=200\text{mA}$	V_F		0.4	0.45	V
	V_F			1.0	V
Leakage current pulse test $t_p < 300\mu\text{s}$ at $V_R=50\text{V}, T_J=25^\circ\text{C}$ at $V_R=50\text{V}, T_J=100^\circ\text{C}$	I_R			100	nA
	I_R			20	μA
Junction Capacitance at $V_R=1\text{V}$, $f=1\text{MHz}$	C_J		2		pF
Reverse Recovery Time Form $I_F=10\text{mA}$, to $I_R=10\text{mA}$ to $I_R=1\text{mA}$ $R_L=100\Omega$	t_{rr}			5	ns
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$			300 ¹⁾	K/W

1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature(DO-35)

RATINGS AND CHARACTERISTIC CURVES BAT41

Figure 1. Forward current versus forward voltage at different temperatures (typical values)

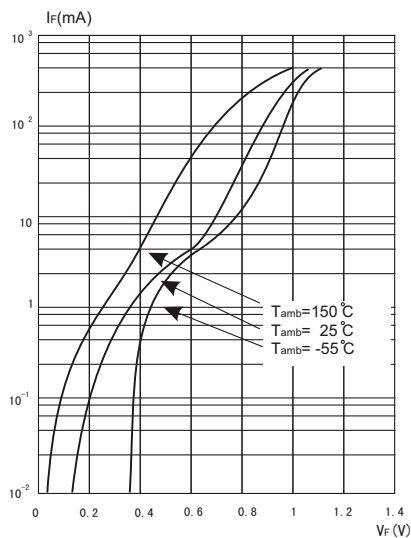


Figure 2. Reverse current versus ambient temperature

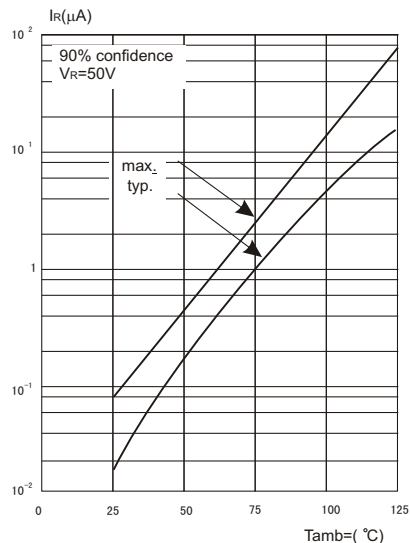
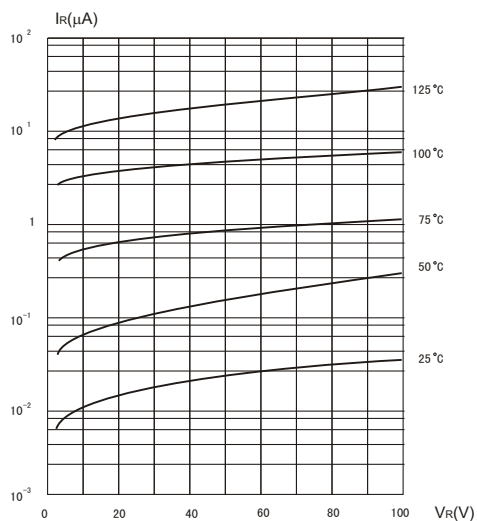


Figure 3. Reverse current versus continuous Reverse voltage (typical values)



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Figure 4. Capacitance C_J versus reverse applied voltage V_R (typical values)

