

Vishay Semiconductors

Small Signal Schottky Diode



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MECHANICAL DATA

Case: MiniMELF (SOD-80) Weight: approx. 31 mg Cathode band color: black Packaging codes/options:

GS18/10K per 13" reel (8 mm tape), 10K/box GS08/2.5K per 7" reel (8 mm tape), 12.5K/box

FEATURES





· This diode features low turn-on voltage and high breakdown voltage



• This device is protected by a PN junction guardring against excessive voltage, such as COMPLIANT electrostatic discharges

- This diode is also available in the DO-35 (DO-204AH) case with type designation BAT41
- AEC-Q101 qualified
- · Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

PARTS TABLE					
PART	ORDERING CODE	INTERNAL CONSTRUCTION	REMARKS		
LL41	LL41-GS18 or LL41-GS08	Single diode	Tape and reel		

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Repetitive peak reverse voltage		V_{RRM}	100	V	
Forward continuous current (1)		I _F	100	mA	
Repetitive peak forward current (1)	$t_p < 1 \text{ s, } \delta < 0.5$	I _{FRM}	350	mA	
Surge forward current (1)	t _p = 10 ms	I _{FSM}	750	mA	
Power dissipation (1)	T _{amb} = 65 °C	P _{tot}	200	mW	

(1) Valid provided that electrodes are kept at ambient temperature

THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Thermal resistance junction to ambient air		R _{thJA}	300 (1)	K/W	
Junction temperature		Tj	125	°C	
Ambient operating temperature range		T _{amb}	-65 to +125	°C	
Storage temperature range		Teta	-65 to +150	°C	

Note

(1) Valid provided that electrodes are kept at ambient temperature



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ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reserve breakdown voltage (1)	I _R = 100 μA	V _(BR)	100	110		V
Leakage current (1)	$V_R = 50 \text{ V}, T_j = 25 ^{\circ}\text{C}$	I _R			100	nA
Leakage current (1)	$V_R = 50 \text{ V}, T_j = 100 ^{\circ}\text{C}$	I _R			20	μA
Forward voltage (1)	I _F = 1 mA	V _F		400	450	mV
Forward voltage (1)	I _F = 200 mA	V _F			1000	mV
Diode capacitance	V _R = 1 V, f = 1 MHz	C _D		2		pF

Note

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

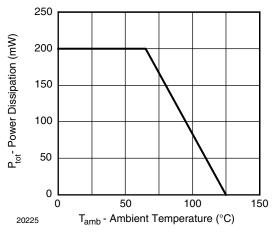


Fig. 1 - Admissible Power Dissipation vs. Ambient Temperature

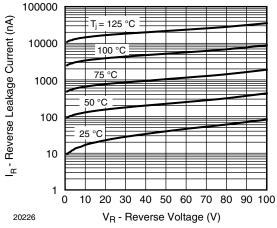


Fig. 2 - Typical Reverse Characteristics

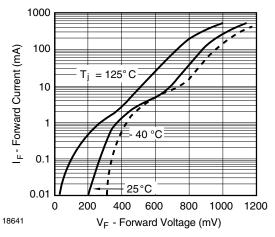


Fig. 3 - Typical Forward Characteristics

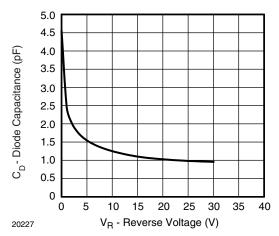
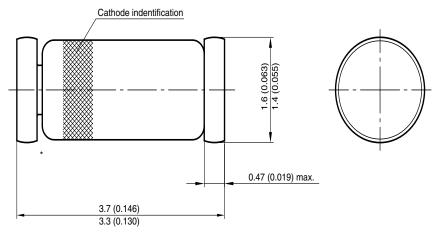


Fig. 4 - Typical Capacitance vs. Reverse Voltage

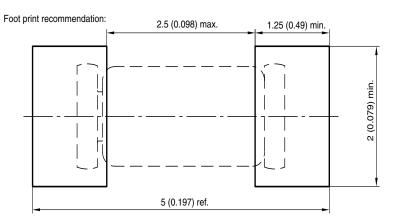
⁽¹⁾ Pulse test, $t_p = 300 \mu s$

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PACKAGE DIMENSIONS in millimeters (inches): MiniMELF (SOD-80)



^{*} The gap between plug and glass can be either on cathode or anode side



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