

Small Signal Schottky Diodes



FEATURES

- Integrated protection ring against static discharge
- Low capacitance
- Low leakage current
- Low forward voltage drop
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT

LINKS TO ADDITIONAL RESOURCES



MECHANICAL DATA

Case: QuadroMELF (SOD-80)

Weight: approx. 34 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

APPLICATIONS

- HF-detector
- Protection circuit
- Diode for low currents with a low supply voltage
- Small battery charger
- Power supplies
- DC/DC converter for notebooks

PARTS TABLE

PART	TYPE DIFFERENTIATION	ORDERING CODE	CIRCUIT CONFIGURATION	REMARKS
LS101A	$V_R = 60$ V, V_F at $I_F = 1$ mA max. 410 mV	LS101A-GS18 or LS101A-GS08	Single	Tape and reel
LS101B	$V_R = 50$ V, V_F at $I_F = 1$ mA max. 400 mV	LS101B-GS18 or LS101B-GS08	Single	Tape and reel
LS101C	$V_R = 40$ V, V_F at $I_F = 1$ mA max. 390 mV	LS101C-GS18 or LS101C-GS08	Single	Tape and reel

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25$ °C, unless otherwise specified)

PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Reverse voltage		LS101A	V_R	60	V
		LS101B	V_R	50	V
		LS101C	V_R	40	V
Peak forward surge current	$t_p = 10$ µs		I_{FSM}	2	A
Repetitive peak forward current			I_{FRM}	150	mA
Forward continuous current			I_F	30	mA

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air	On PC board 50 mm x 50 mm x 1.6 mm	R_{thJA}	320	K/W
Junction temperature		T_j	125	°C
Storage temperature range		T_{stg}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25 \text{ }^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 10 \text{ }\mu\text{A}$	LS101A	$V_{(BR)}$	60			V
		LS101B	$V_{(BR)}$	50			V
		LS101C	$V_{(BR)}$	40			V
Leakage current	$V_R = 50 \text{ V}$	LS101A	I_R		200		nA
	$V_R = 40 \text{ V}$	LS101B	I_R		200		nA
	$V_R = 30 \text{ V}$	LS101C	I_R		200		nA
Forward voltage drop	$I_F = 1 \text{ mA}$	LS101A	V_F		410		mV
		LS101B	V_F		400		mV
		LS101C	V_F		390		mV
	$I_F = 15 \text{ mA}$	LS101A	V_F		1000		mV
		LS101B	V_F		950		mV
		LS101C	V_F		900		mV
Diode capacitance	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$	LS101A	C_D		2		pF
		LS101B	C_D		2.1		pF
		LS101C	C_D		2.2		pF

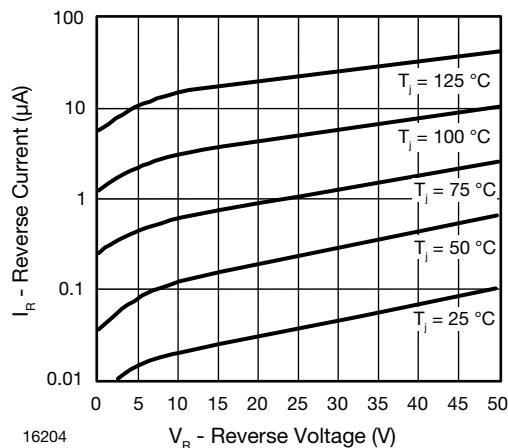
TYPICAL CHARACTERISTICS ($T_{amb} = 25 \text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Reverse Current vs. Reverse Voltage

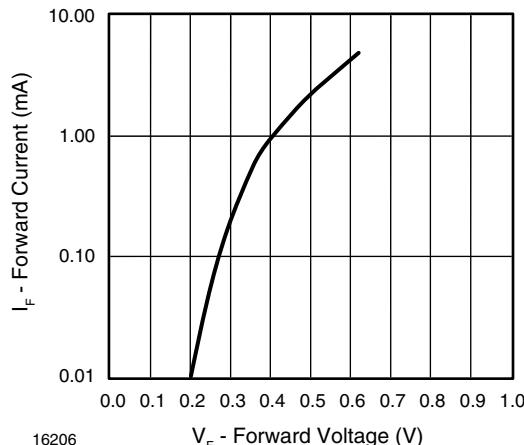


Fig. 3 - Forward Current vs. Forward Voltage

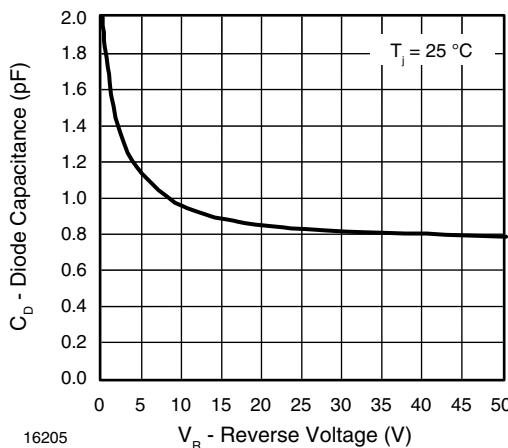
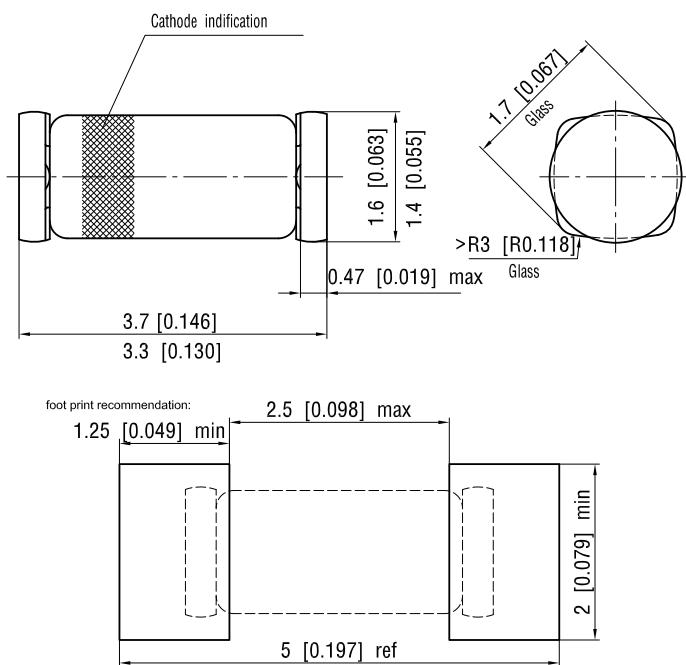


Fig. 2 - Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): **QuadroMELF (SOD-80)**


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