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Vishay Semiconductors

Small Signal Schottky Diodes



LINKS TO ADDITIONAL RESOURCES

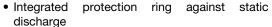


MECHANICAL DATA

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





- Low capacitance
- Low leakage current
- Low forward voltage drop
- · Very low switching time
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

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		
BAS81	V _R = 40 V	BAS81-GS18 or BAS81-GS08	Single	Tape and reel		
BAS82	V _R = 50 V	BAS82-GS18 or BAS82-GS08	Single	Tape and reel		
BAS83	V _R = 60 V	BAS83-GS18 or BAS83-GS08	Single	Tape and reel		

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
		BAS81	V _R	40	V
Reverse voltage		BAS82	V _R	50	V
		BAS83	V _R	60	V
Peak forward surge current	t _p = 1 s		I _{FSM}	500	mA
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		Tj	125	°C		
Storage temperature range		T _{stg}	-65 to +150	°C		



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ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
	I _F = 0.1 mA	V _F			330	mV
Forward voltage	I _F = 1 mA	V_{F}			410	mV
	I _F = 15 mA	V _F			1000	mV
Reserve current	$V_R = V_{Rmax}$.	I _R			200	nA
Diode capacitance	V _R = 1 V, f = 1 MHz	C _D			1.6	pF

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

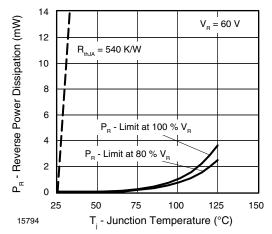


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

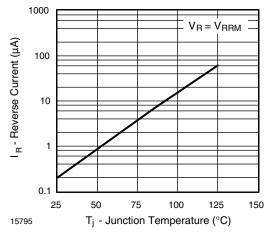


Fig. 2 - Reverse Current vs. Junction Temperature

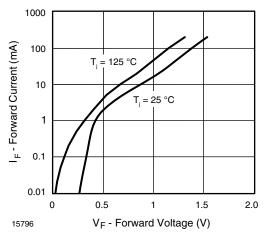


Fig. 3 - Forward Current vs. Forward Voltage

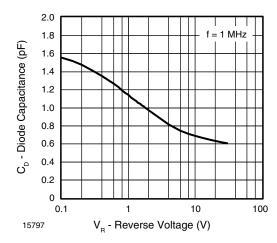
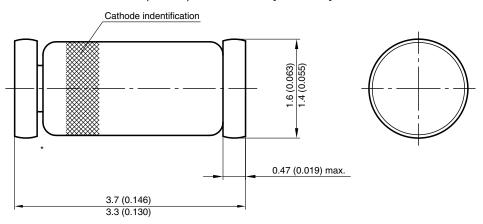


Fig. 4 - Diode Capacitance vs. Reverse Voltage

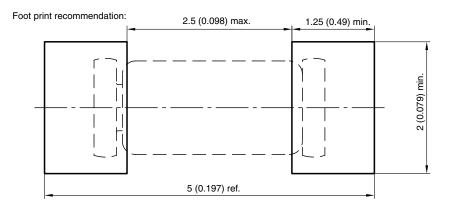
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PACKAGE DIMENSIONS in millimeters (inches): MiniMELF (SOD-80)



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



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