BAS381, BAS382, BAS383

Vishay Semiconductors

Small Signal Schottky Diodes

FEATURES

- Integrated protection ring against static discharge
- 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

- · General purpose and switching Schottky barrier diode
- 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
BAS381	V _R = 40 V	BAS381-TR3 or BAS381-TR	Single	Tape and reel
BAS382	V _R = 50 V	BAS382-TR3 or BAS382-TR	Single	Tape and reel
BAS383	$V_{R} = 60V$	BAS383-TR3 or BAS383-TR	Single	Tape and reel

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
		BAS381	V _R	40	V
Reverse voltage		BAS382	V _R	50	V
		BAS383	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		
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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LINKS TO ADDITIONAL RESOURCES



MECHANICAL DATA

Case: MicroMELF

Weight: approx. 12 mg

Cathode band color: black

Packaging codes/options:

TR3/10K per 13" reel (8 mm tape), 10K/box TR/2.5K per 7" reel (8 mm tape), 12.5K/box (e2)



RoHS

COMPLIANT HALOGEN

FREE



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ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
	I _F = 0.1mA	VF			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	CD			1.6	pF

TYPICAL CHARACTERISTICS (Tamb = 25 °C, unless otherwise specified)

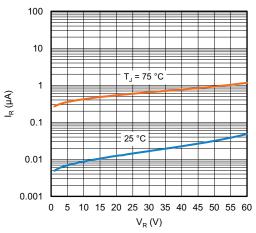


Fig. 1 - Typical Reverse Leakage Current vs. Reverse Voltage

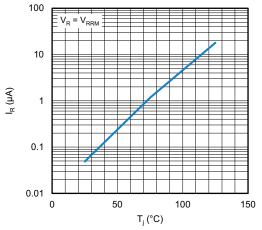


Fig. 2 - Reverse Current vs. Junction Temperature

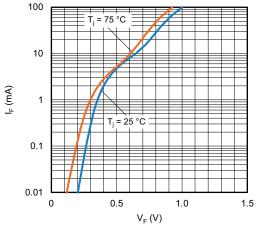


Fig. 3 - Typical Forward Current vs. Forward Voltage

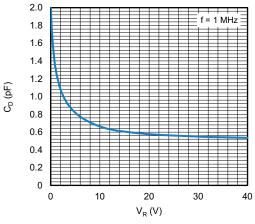


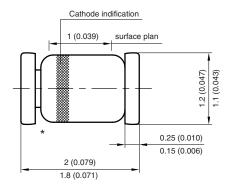
Fig. 4 - Typical Capacitance vs. Reverse Voltage



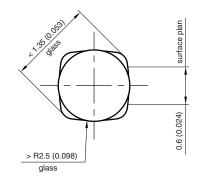
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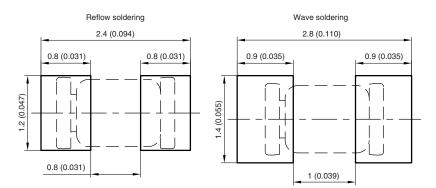
PACKAGE DIMENSIONS in millimeters (inches): MicroMELF



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



Foot print recommendation:



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