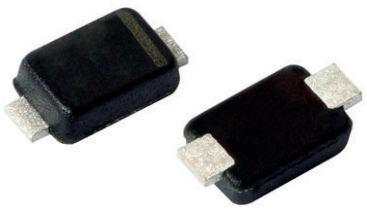
Small Signal Schottky Diode



FEATURES

- AEC-Q101 qualified available
- Base P/N-G3 - RoHS-compliant, green, industrial grade
- Base P/N-HG3 - RoHS-compliant, green, AEC-Q101 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

e3

RoHS COMPLIANT

HALOGEN FREE

GREEN (5-2008)

LINKS TO ADDITIONAL RESOURCES

3D Models

MECHANICAL DATA

Case: MicroSMF (DO-219AC)

Weight: 4.8 mg

PARTS TABLE						
PART	ORDERING CODE	AEC-Q101 QUALIFIED	CIRCUIT CONFIGURATION	TYPE MARKING	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY
BAT165	BAT165-G3/H	no	Single	165	4500 per 7" reel (8 mm tape)	22 500/box
	BAT165-HG3/H	yes				

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage		V_R	40	V
Forward continuous current (1)		I_F	750	mA
Average rectified forward current (1)		$I_{F(AV)}$	500	mA
Surge forward current (1)	t_p < 10 ms	I_{FSM}	2.5	A
Power dissipation	On FR-4 board with recommended footprint for reflow soldering	P_{tot}	290	mW
	On FR-4 board with 20 mm x 20 mm footprint	P_{tot}	740	mW

Note

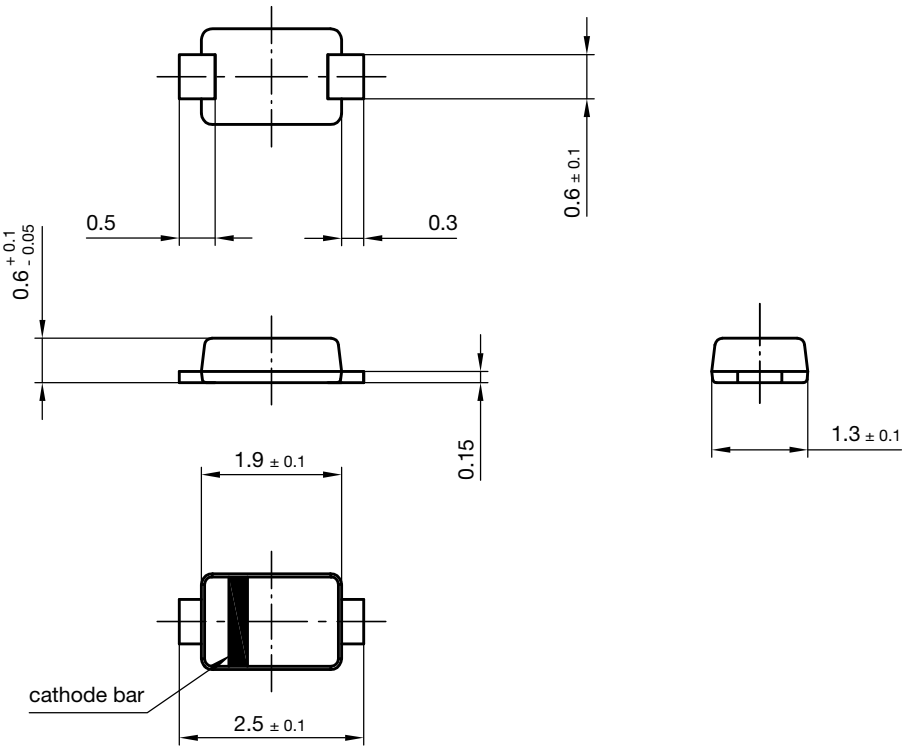
(1) Valid provided that electrodes are kept at ambient temperature

THERMAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air	On FR-4 board acc. JEDEC® 51-3 with recommended footprint for reflow soldering	R_{thJA}	430	K/W
	On FR-4 board acc. JEDEC® 51-3 with 20 mm x 20 mm footprint	R_{thJA}	170	K/W
Thermal resistance junction to lead		R_{thJL}	45	K/W
Junction temperature		T_j	150	°C
Operating temperature range		T_{op}	-55 to +150	°C
Storage temperature range		T_{stg}	-55 to +150	°C

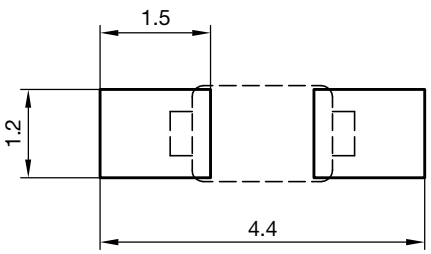
ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)						
PARAMETER	**TEST CONDITION**	**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Reverse breakdown voltage	I_R = 100 µA (pulsed)	$V_{(BR)}$	40			V
Leakage current (1)	V_R = 40 V	I_R			8	µA
	V_R = 40 V, T_j = 65 °C	I_R			900	µA
Forward voltage (1)	I_F = 10 mA	V_F	230	315	380	mV
	I_F = 100 mA	V_F	320	390	470	mV
	I_F = 250 mA	V_F	350	440	540	mV
	I_F = 750 mA	V_F	440	580	740	mV
Diode capacitance	V_R = 10 V, f = 1 MHz	C_D		8.4	12	pF

Note
(1) Pulse test; $t_p \leq 300$ µs, $t_p/T < 0.02$

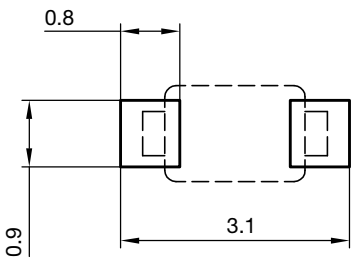
PACKAGE DIMENSIONS in millimeters (inches): **MicroSMF (DO-219AC)**



foot print recommendation
for wave soldering:



foot print recommendation
for reflow soldering:



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