

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



LINKS TO ADDITIONAL RESOURCES



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 ($T_{amb} = 25^{\circ}\text{C}$, 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⁾	$t_p < 10 \text{ ms}$	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

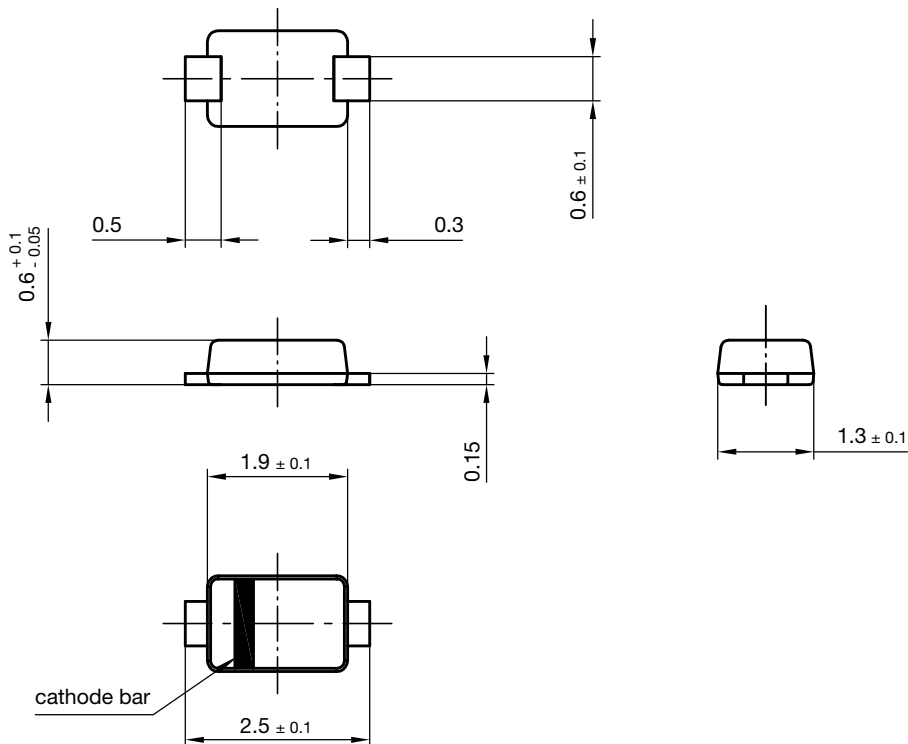
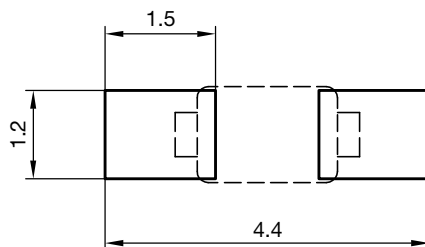
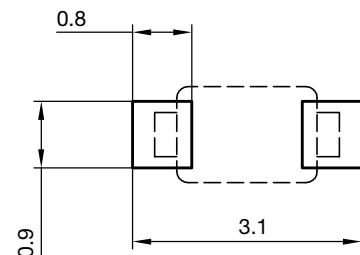
⁽¹⁾ Valid provided that electrodes are kept at ambient temperature

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

PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 100\text{ }\mu\text{A}$ (pulsed)	$V_{(BR)}$	40			V
Leakage current ⁽¹⁾	$V_R = 40\text{ V}$	I_R			8	μA
	$V_R = 40\text{ V}$, $T_j = 65\text{ }^{\circ}\text{C}$	I_R			900	μA
Forward voltage ⁽¹⁾	$I_F = 10\text{ mA}$	V_F	230	315	380	mV
	$I_F = 100\text{ mA}$	V_F	320	390	470	mV
	$I_F = 250\text{ mA}$	V_F	350	440	540	mV
	$I_F = 750\text{ mA}$	V_F	440	580	740	mV
Diode capacitance	$V_R = 10\text{ V}$, $f = 1\text{ MHz}$	C_D		8.4	12	pF

Note
⁽¹⁾ Pulse test; $t_p \leq 300\text{ }\mu\text{s}$, $t_p/T < 0.02$
PACKAGE DIMENSIONS in millimeters (inches): **MicroSMF (DO-219AC)**

foot print recommendation
for wave soldering:

foot print recommendation
for reflow soldering:


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