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Small Signal Schottky Diode



LINKS TO ADDITIONAL RESOURCES



MECHANICAL DATA

Case: MicroSMF (DO-219AC)

Weight: 4.8 mg

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 <u>www.vishay.com/doc?99912</u>





ROHS COMPLIANT HALOGEN FREE GREEN

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			4500 per 7 Teer (8 mm tape)		

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	Α		
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			
The word variation on it mation to emphise their	On FR-4 board acc. JEDEC® 51-3 with recommended footprint for reflow soldering	R _{thJA}	430	K/W			
Thermal resistance junction to ambient air	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		Tj	150	°C			
Operating temperature range		T _{op}	-55 to +150	°C			
Storage temperature range		T _{stg}	-55 to +150	°C			

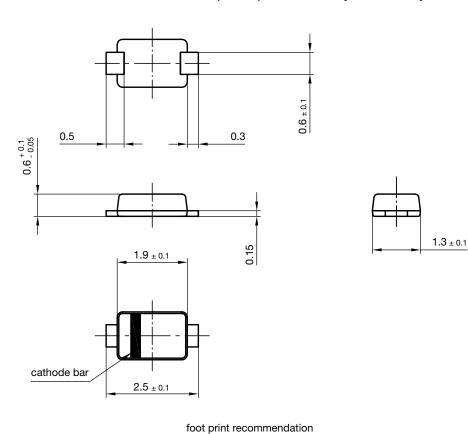


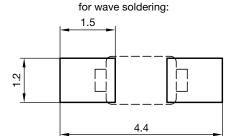
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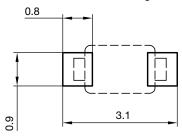
ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	I _R = 100 μA (pulsed)	V _(BR)	40			V
Leakage current (1)	V _R = 40 V	I _R			8	μΑ
Leakage current (1)	$V_R = 40 \text{ V}, T_j = 65 ^{\circ}\text{C}$	I _R			900	μΑ
	I _F = 10 mA	V _F	230	315	380	mV
Forward voltage (1)	I _F = 100 mA	V _F	320	390	470	mV
Forward voltage (*)	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

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





foot print recommendation for reflow soldering:



22741

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 $[\]overline{\mbox{Note}} \begin{tabular}{ll} \hline \mbox{Note} \\ \mbox{(1)} & \mbox{Pulse test; } t_p \leq 300 \ \mu \mbox{s, } t_p \slash T < 0.02 \\ \end{tabular}$



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