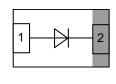


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Vishay Semiconductors

Small Signal Fast Switching Diode





LINKS TO ADDITIONAL RESOURCES







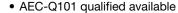
MECHANICAL DATA

Case: DFN1006-2A Weight: 0.83 mg

Peak temperature max. Packaging codes / options: 08/10K per 7" reel (8 mm tape)

FEATURES

- · Silicon epitaxial planar diode
- · Fast switching diode
- Leadless ultra small DFN1006-2A package $(1 \text{ mm} \times 0.6 \text{ mm} \times 0.45 \text{ mm})$
- Power dissipation better than SOT-23
- Surface-mounted device (SMD) plastic package with visible and sidewall plated / wettable flanks
- Soldering can be checked by standard visual inspection. No X-ray inspection necessary to meet automotive AOI requirements













cigit. 0.00 mg	
olding compound flammability rating: UL 94 V-0	
erminals: high temperature soldering guaranteed:	
eak temperature max 260 °C	

PARTS TABLE					
PART	ORDERING CODE	AEC-Q101 QUALIFIED	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS
BAS16L	BAS16L-G3-08	no	Single ,d		Tape and reel
BASTOL	BAS16L-HG3-08	yes	Sirigie	Ü.	rape and reel

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage		V_R	100	V
Forward current	on FR-4 board with recommended soldering footprint	I _F	250	mA
Non repetitive forward current (1)	t _p = 1 μs		9	А
	t _p = 1 ms	I _{FSM}	1.7	
	t _p = 1 s		0.5	
Repetitive peak forward current	$T_L = 100 ^{\circ}\text{C}, t_p = \le 1 \text{ms}, D = 0.05$	I _{FRM}	500	mA
Power dissipation	on FR-4 board with recommended soldering footprint	В	300	mW
	R _{thJL} = 100 K/W	P _{tot}	1250	mW

Note

(1) Square wave, $T_j = 25$ °C prior to surge

THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Thermal resistance junction to ambient air	according to JEDEC® 51-3 on FR-4 board with recommended soldering footprint	R _{thJA}	420	K/W	
Thermal resistance junction to lead		R _{thJL}	100	K/W	
Maximum junction temperature		T _{j max.}	150	°C	
Storage temperature range		T _{stg}	-55 to +150	°C	
Operating temperature range		T _{op}	-55 to +150	°C	



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ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION SYMBOL		TYP.	MAX.	UNIT
Forward voltage	I _F = 150 mA			1.250	V
	I _F = 50 mA	V _F		1.0	V
	I _F = 10 mA	VF		0.86	V
	I _F = 1 mA			0.715	V
Leakage current	V _R = 80 V	I _R		500	nA
	$V_R = 80 \text{ V}, T_J = 150 ^{\circ}\text{C}$	I _R		100	μΑ
	V _R = 100 V	I _R		1	μA
Diode capacitance	$V_R = 0 V, f = 1 MHz$	C _D 0.36		2	pF
Reverse recovery time	$I_F = 10 \text{ mA}, I_R = 10 \text{ mA}, I_R = 1 \text{ mA}$	t _{rr}	•	4	ns

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

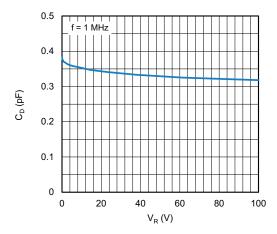


Fig. 1 - Typical Capacitance vs. Reverse Voltage

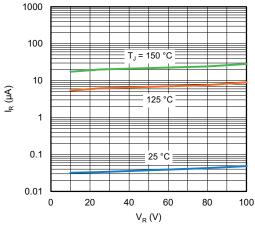


Fig. 3 - Typical Reverse Leakage Current vs. Reverse Voltage

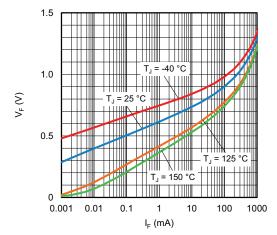
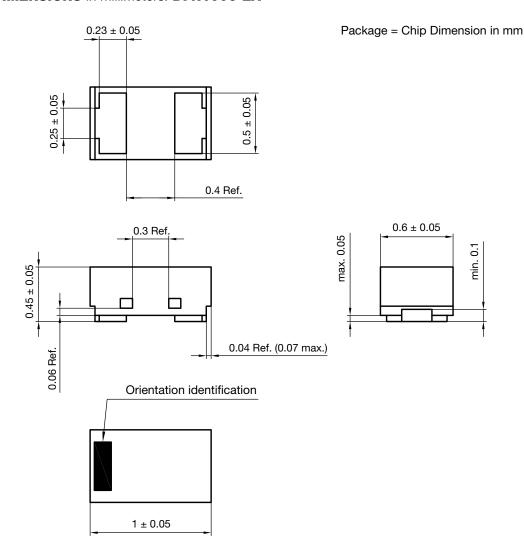


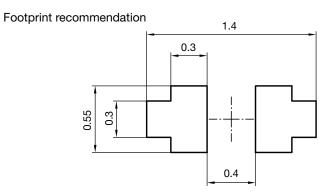
Fig. 2 - Typical Forward Voltage vs. Forward Current



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PACKAGE DIMENSIONS in millimeters: DFN1006-2A



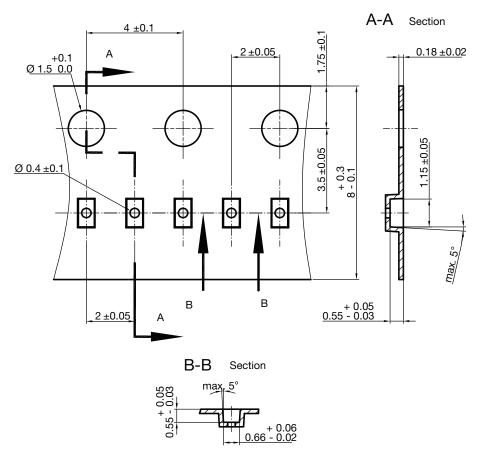


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CARRIER TAPE DFN1006-2A



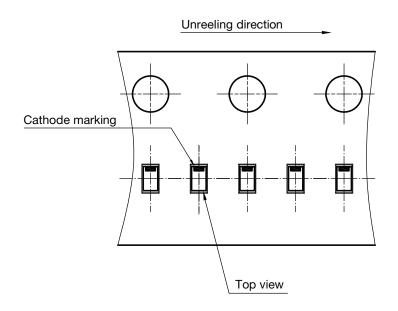
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S8-V-3906.04-064 (4)

created 28.10.2019

surface resistance: 10^5 - $10^{11} \frac{OHMS}{SQ}$ Cummulative tolerances of 10 sprocket holes is ± 0.2 mm

ORIENTATION IN CARRIER TAPE DFN1006-2A





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