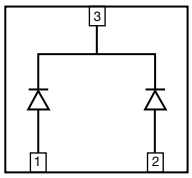
Small Signal Fast Switching Diode

DFN1110-3A



LINKS TO ADDITIONAL RESOURCES

3D Models | Models | Parametric Search | Marking | Application Notes | Order Samples

FEATURES

- Silicon epitaxial planar diode
- Fast switching diode
- Leadless ultra small DFN1110-3A package (1.1 mm x 1.0 mm x 0.45 mm)
- 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
- AEC-Q101 qualified available
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

AUTOMOTIVE GRADE Available

Pb-free

e3

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

MECHANICAL DATA

Case: DFN1110-3A

Weight: 1.43 mg

Molding compound flammability rating: UL 94 V-0

Terminals: high temperature soldering guaranteed: peak temperature max. 260 °C

Packaging codes / options:

08/10K per 7" reel (8 mm tape)

PARTS TABLE

PART	ORDERING CODE	AEC-Q101 QUALIFIED	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS
BAV70L	BAV70L-G3-08	No	Common cathode	JA	Tape and reel
	BAV70L-HG3-08	Yes			

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage		V_R	100	V
Forward current	Infinite heatsink	I_F	300	mA
Non repetitive forward current (1)	t_p = 1 µs	I_{FSM}	9	A
	t_p = 1 ms		1.7	
	t_p = 1 s		0.8	
Repetitive peak forward current	T_L = 100 °C, t_p = ≤ 1 ms, D = 0.05	I_{FRM}	100	mA
Power dissipation	Infinite heatsink	P_{tot}	625	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 lead	Infinite heatsink	R_{thJL}	200	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

ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)					
PARAMETER	**TEST CONDITION**	**SYMBOL**	**TYP.**	**MAX.**	**UNIT**
Forward voltage	I_F = 150 mA	V_F		1.250	V
	I_F = 50 mA			1.0	V
	I_F = 10 mA			0.86	V
	I_F = 1 mA			0.715	V
Leakage current	V_R = 80 V	I_R		500	nA
	V_R = 80 V, T_J = 150 °C	I_R		100	µA
	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 mA, I_R = 10 mA, i_R = 1 mA	t_{rr}		4	ns

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

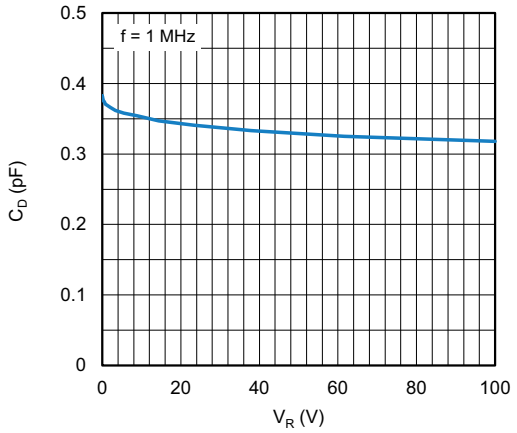


Fig. 1 - Typical Capacitance vs. Reverse Voltage

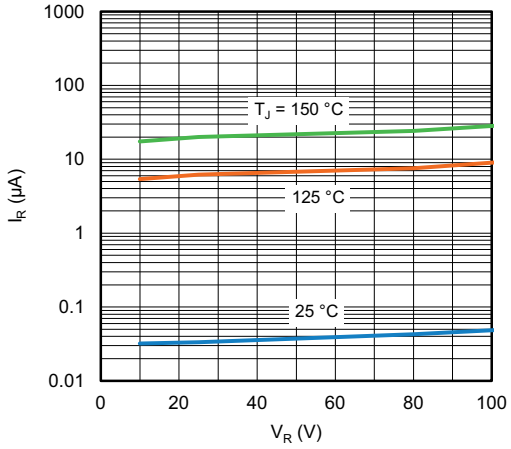


Fig. 3 - Typical Reverse Leakage Current vs. Reverse Voltage

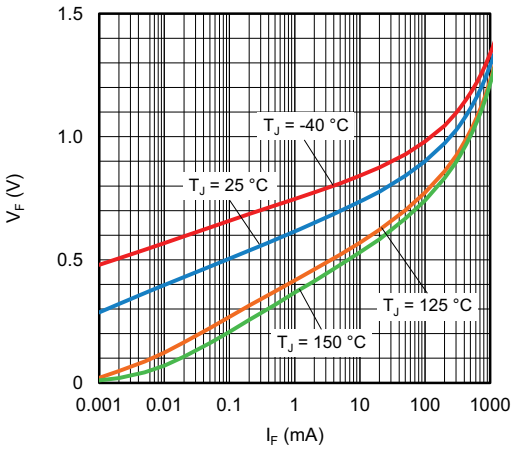
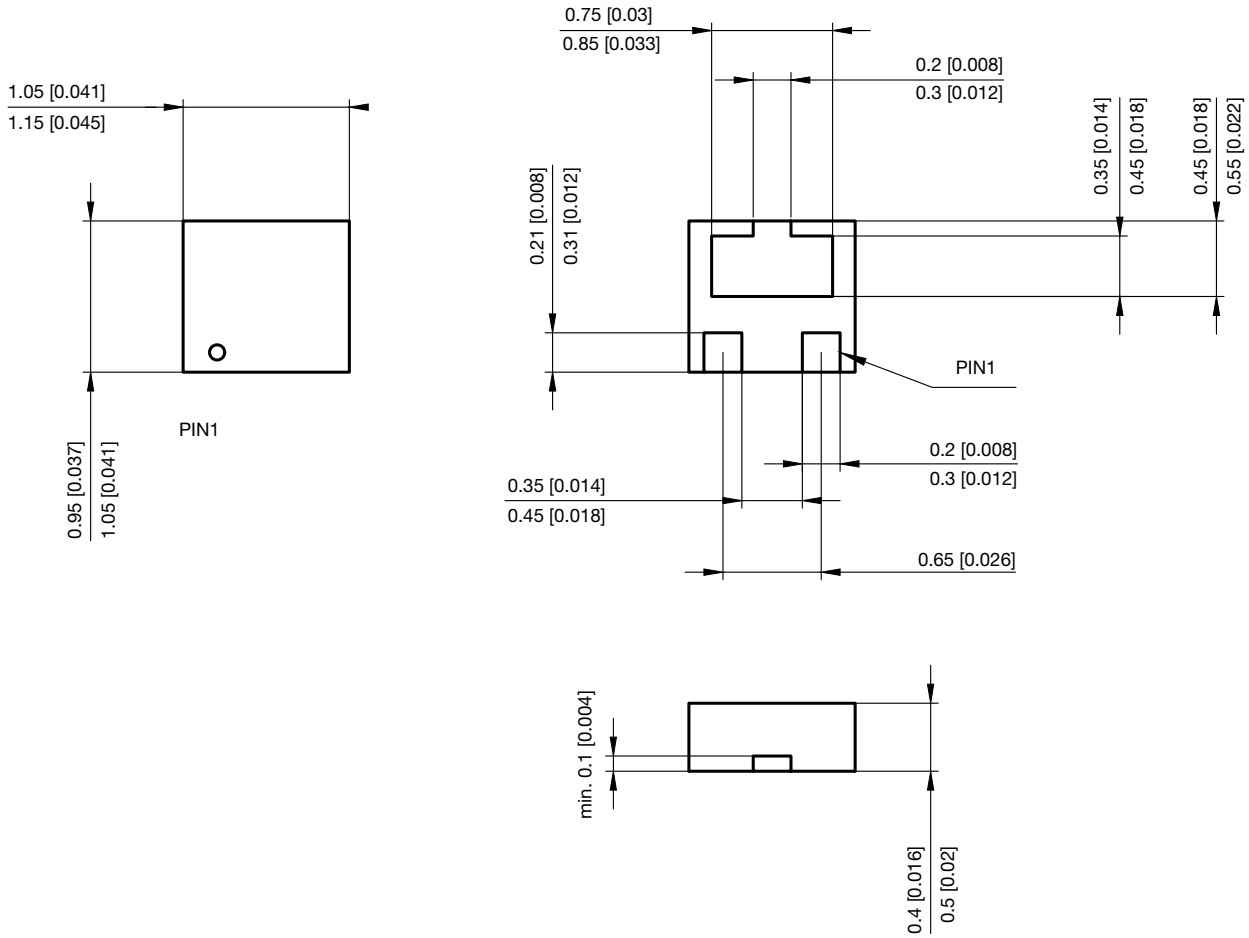
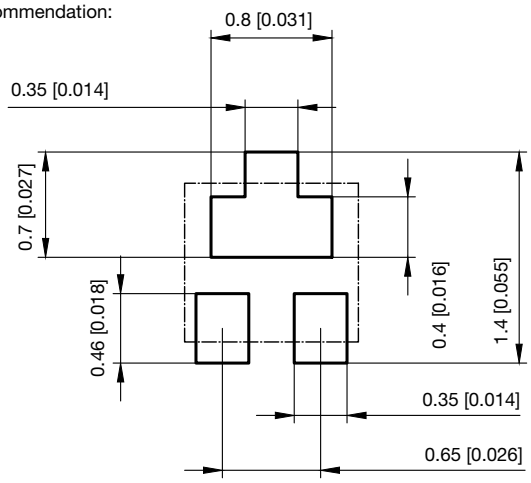


Fig. 2 - Typical Forward Voltage vs. Forward Current

PACKAGE DIMENSIONS in millimeters: **DFN1110-3A**

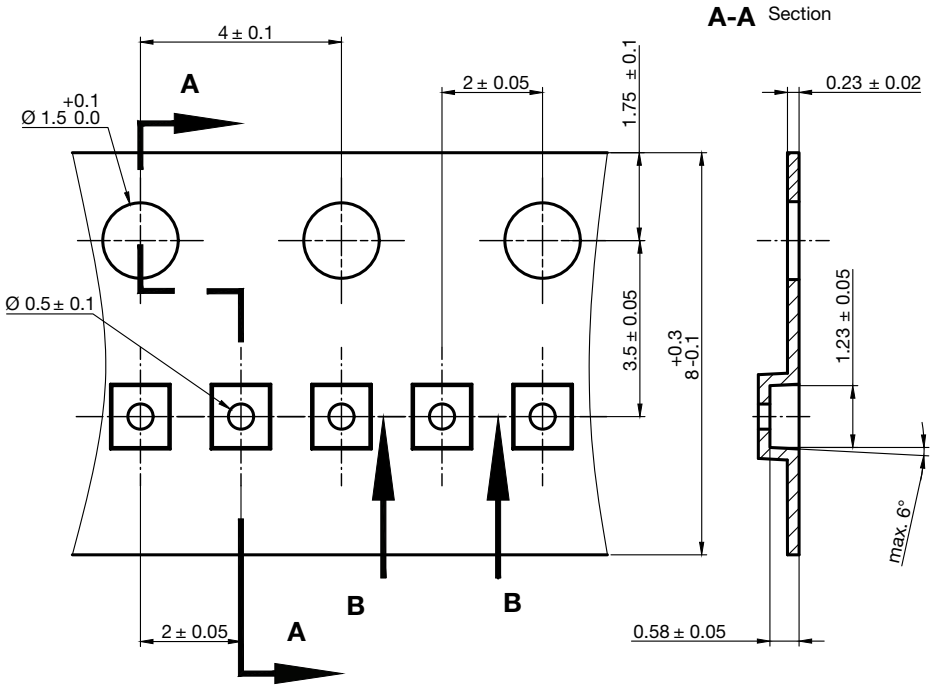


foot print recommendation:



Document no.:S8-V-3906.04-060 (4)
Created - Date: 25. Sept. 2018
Rev.2 - Date: 03. June 2020

CARRIER TAPE DFN11110-3A



surface resistance: 10^{5} - 10^{11} $\frac{\text{OHMS}}{\text{SQ}}$

Cummulative tolerances of 10 sprocket holes is ± 0.2mm

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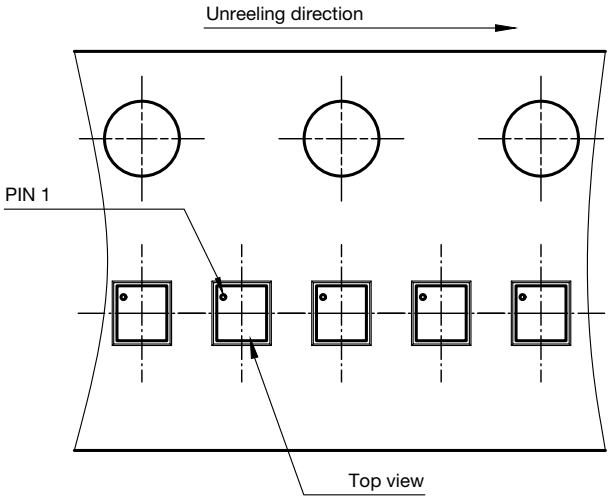
ORIENTATION IN CARRIER DFN11110-3A



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