

1A,600V Ultrafast Recovery Rectifier

Features

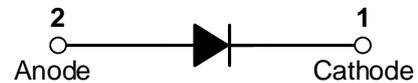
- FRED Wafer Construction
- Low forward drop voltage, low power loss
- High Surge Current Capability
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21



DFN3418-2L

Applications

- SMPS
- Lighting
- UPS



Mechanical Data

- Case: Epoxy, Molded
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec

Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)			
Parameter	Symbol	ES1JZ	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	600	V
Working peak reverse voltage	V _{RWM}	600	V
Maximum DC blocking voltage	V _{DC}	600	V
Maximum average forward	I _{F(AV)}	1	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	25	A
Operating junction temperature range	T _J	-55 to +150	°C
Storage temperature range	T _{STG}	-55 to +150	°C

Electrical Specifications ($T_A=25^{\circ}\text{C}$ unless otherwise noted)					
Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward drop voltage ^(Note1)	V_F	$I_F=1\text{A}, T_J=25^{\circ}\text{C}$	-	1.70	V
		$I_F=1\text{A}, T_J=100^{\circ}\text{C}$	-	-	
Reverse leakage current @ V_R ^(Note2)	I_R	$T_J=25^{\circ}\text{C}$	-	5	uA
		$T_J=100^{\circ}\text{C}$	-	-	
Reverse recovery time	t_{rr}	$I_F=0.5\text{A},$ $I_R=1.0\text{A}, I_{RR}=0.25\text{A}$	-	35	ns

Thermal-Mechanical Specifications ($T_A=25^{\circ}\text{C}$ unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Lead	$R_{\theta JL}$	40	$^{\circ}\text{C}/\text{W}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	80	$^{\circ}\text{C}/\text{W}$

Note:

1. Pulse test with $PW=0.3\text{ms}$, duty cycle=2%
2. Pulse test with $PW=30\text{ms}$

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

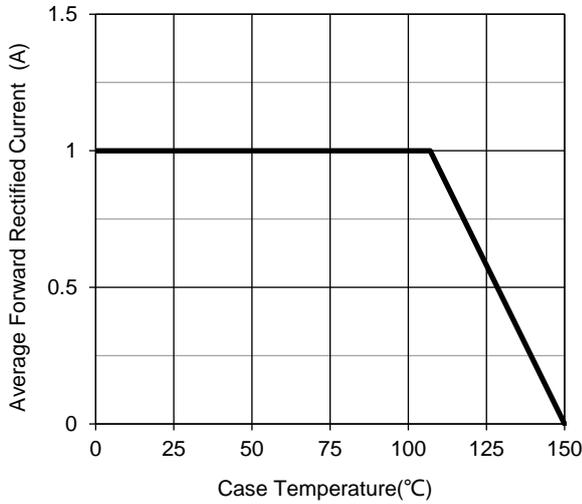


Fig.1 – Forward Current Derating Curve

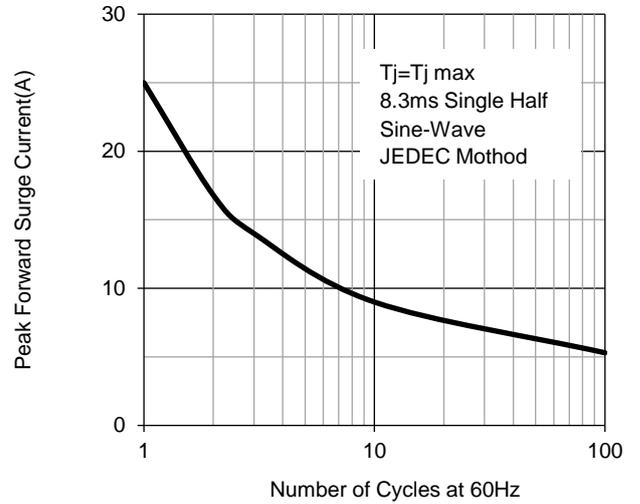


Fig.2 – Maximum Non-Repetitive Surge Current

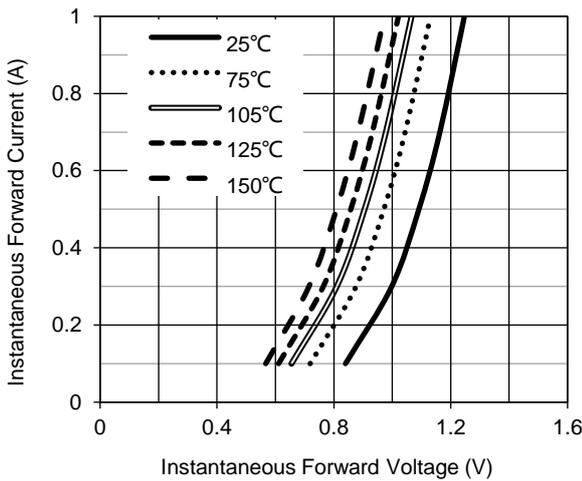


Fig.3 – Typical Forward Voltage Characteristics

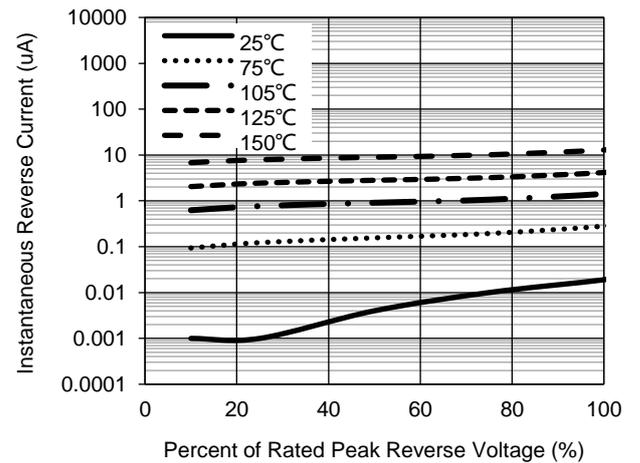


Fig.4 – Typical Reverse Current Characteristics

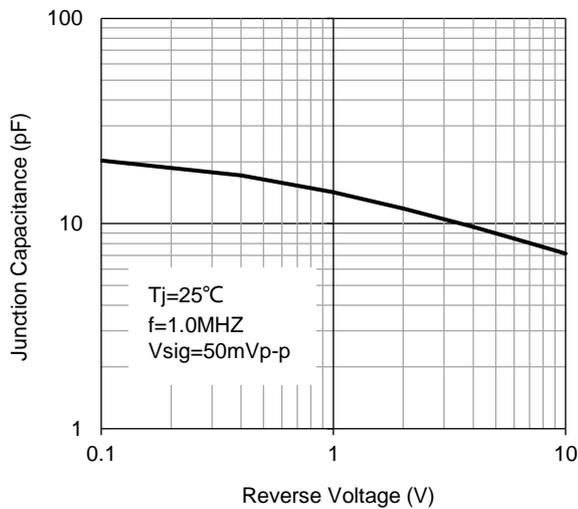
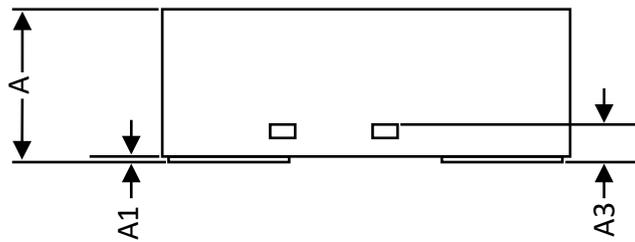
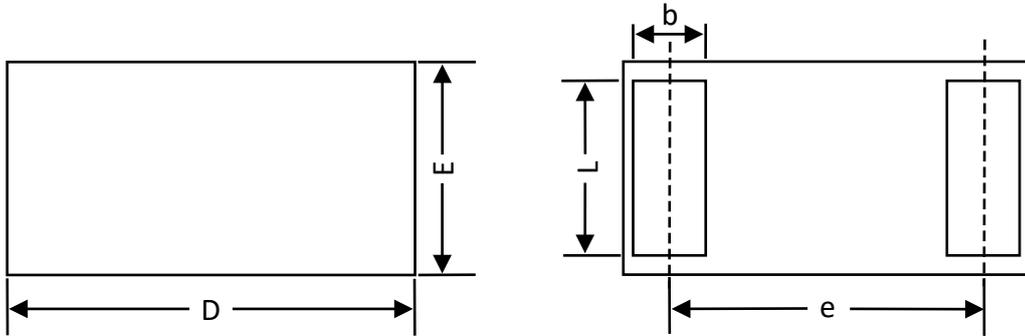


Fig.5 – Typical Junction Capacitance

Package Outline Dimensions (Unit: millimeters)

DFN3418-2L



DFN3418-2L			
	Min.	Nom.	Max.
A	0.70	0.75	0.80
A1	0.00	-	0.05
A3	0.2 REF.		
D	3.35	3.40	3.45
E	1.75	1.80	1.85
b	0.55	0.60	0.65
L	1.35	1.45	1.55
e	2.65 BSC		

Marking Outline



1. Part Name: E1JZ
2. Date Code: XXX

年份	2023	2024	2025	2026	2027	2028	...
代码	A	B	C	D	E	F	...

周期	第 1 周	第 2 周	...	第 28 周	第 29 周	第 30 周	...
代码	01	02	...	28	29	30	...

Revision History

Document Version	Date of release	Description of changes
Rev.A	2024.01.04	Preliminary Datasheet

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