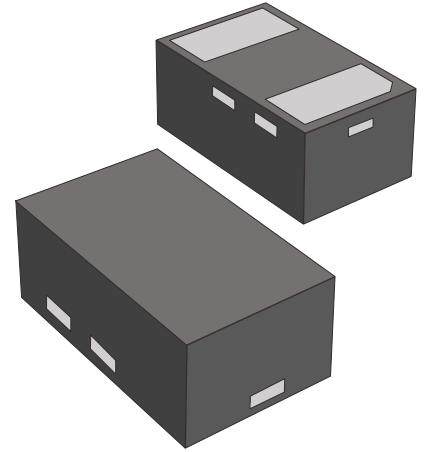


Features

- ◆ The plastic package carries UL Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low power loss, high efficiency
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260°C/10 seconds at terminals
- ◆ ESD Rating:
 - Human Body Model: Class 3B
 - Machine Model: Class C



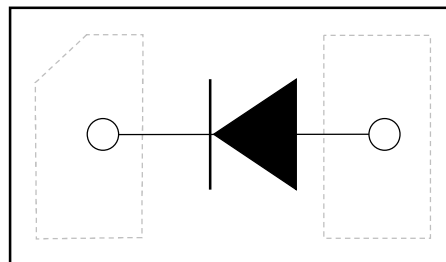
Applications

- ◆ LCD and Keypad Backlighting
- ◆ Camera Photo Flash
- ◆ Buck and Boost dc-dc Converters
- ◆ Reverse Voltage and Current Protection
- ◆ Clamping & Protection

Mechanical Data

- ◆ Package: DFN1610
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Packaging: Tape and Reel
- ◆ RoHS/WEEE Compliant

Schematic & PIN Configuration



DFN1610

Absolute Maximum Ratings

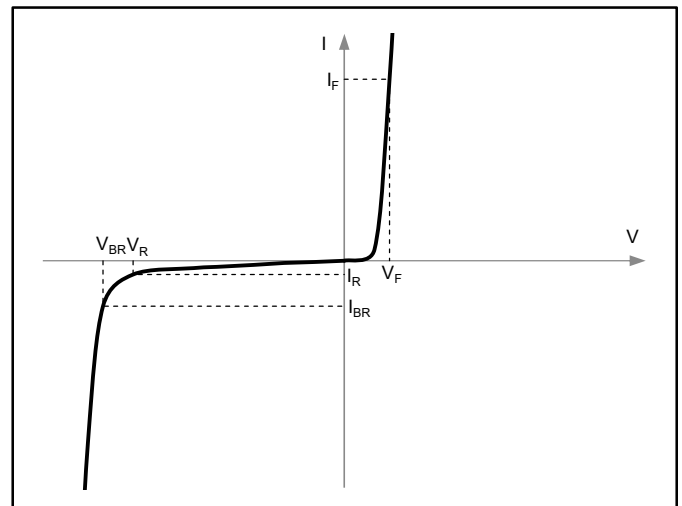
Parameter	Symbol	Value	Units
Maximum repetitive peak reverse voltage	V_{RRM}	40	V
Maximum RMS voltage	V_{RMS}	28	V
Maximum average forward rectified current	I_{AV}	2	A
Peak forward surge current	I_{FSM}	20	A
I ² t Rating for Fusing (t < 8.3ms)	I^2T	1.66	A ² s
Operating Temperature Range	T_J	-55 to 125	°C
Storage Temperature Range	T_{STG}	-55 to 150	°C

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	45			V
Maximum DC reverse current	I_R	$V_R = 40\text{V}$, $T_a=25^\circ\text{C}$		50	70	uA
Maximum DC reverse current (High Temp.)	I_{RT}	$V_{RT} = 40\text{V}$, $T_a=100^\circ\text{C}$			8000	uA
Instantaneous forward voltage	V_F	$I_F = 2\text{A}$			0.52	V
Instantaneous forward voltage	V_{F1}	$I_{F1} = 1\text{A}$			0.45	V

Electrical Parameters

Symbol	Definition
I_F	Instantaneous forward current
V_F	Instantaneous forward voltage
V_R	Maximum DC reverse voltage
I_R	Maximum DC reverse current
V_{BR}	Breakdown Voltage
I_{BR}	Breakdown Current



Typical Characteristics

Fig. 1 - Forward Current Derating Curve

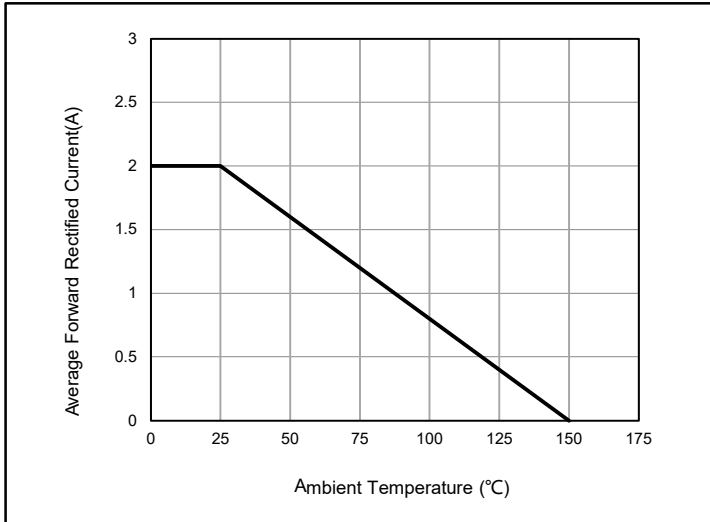


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

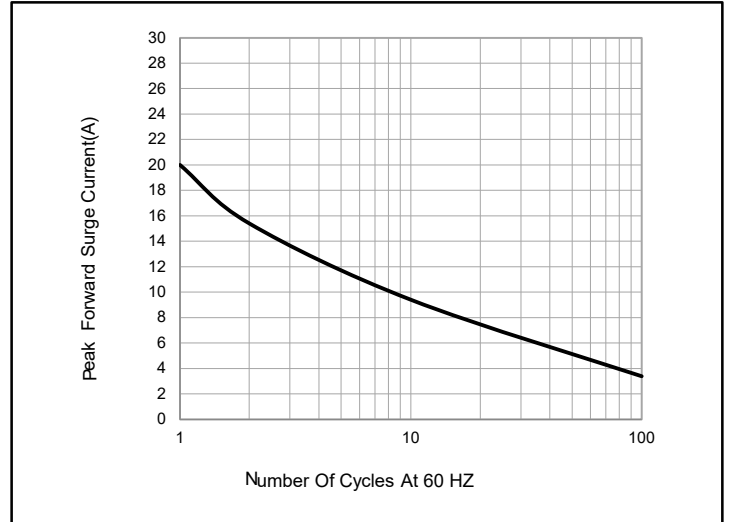


Fig. 3 - Typical Instantaneous Forward Characteristics

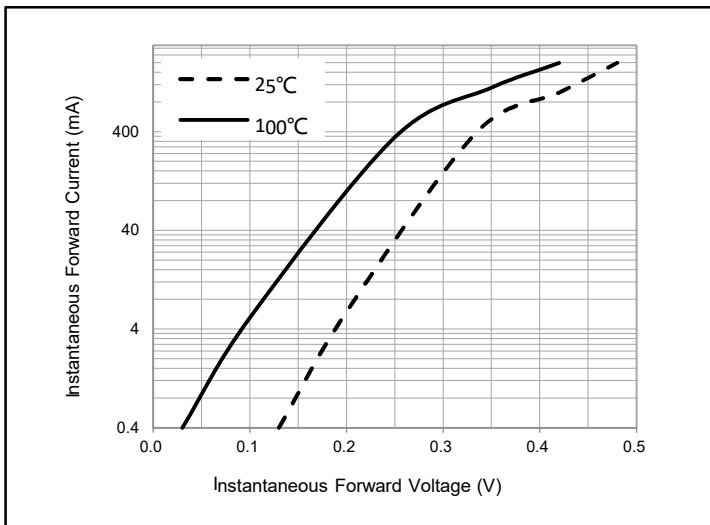
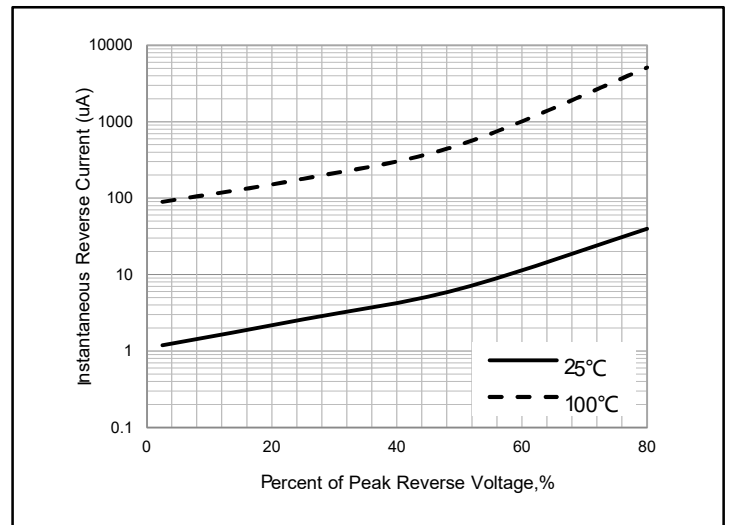
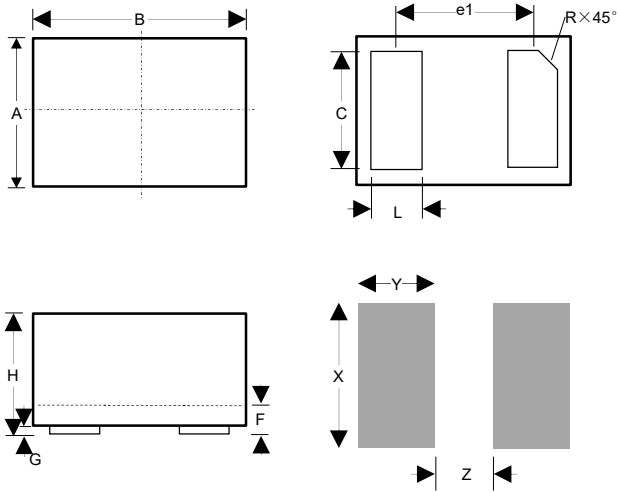


Fig. 4 - Typical Reverse Characteristics



Outline Drawing



DFN1610						
SYMBOL	Millimeters			Inches		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.95	1	1.05	0.037	0.039	0.041
B	1.55	1.6	1.65	0.061	0.063	0.065
C	0.75	0.8	0.85	0.03	0.031	0.033
D	1.55	1.6	1.65	0.061	0.063	0.065
F	0.15			0.006		
G			0.05			0.002
H	0.45	0.5	0.55	0.018	0.02	0.022
L	0.35	0.4	0.45	0.014	0.016	0.018
e1	1.1			0.043		
R	0.15	0.2	0.25	0.006	0.008	0.01
X	1			0.039		
Y	0.625			0.025		
Z	0.6			0.024		

Marking



Marking Code: **S24**
 Pin Marks: Cathode Line

Ordering Information

Order Code	Package	Base Quantity	Delivery Mode
NSR20F40	DFN1610	3000 PCS/Reel	Tape and Reel

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