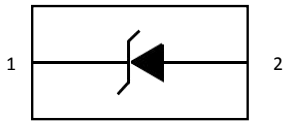
SURFACE MOUNT ZENER DIODE

Features

- Ultra-Small Leadless Surface Mount Package
- Ideally Suited for Automated Assembly Processes
- **Lead Free By Design/RoHS Compliant (Note 1)**
- **"Green" Device (Note 2)**



Case: DFN1006-2

Mechanical Data

- Case: DFN1006-2
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: Cathode Dot (See marking information)
- Terminals: Finish ¾ NiPdAu annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208
- Marking: See Electrical Characteristics Table, Dot Denotes Cathode Side (See marking information)
- Ordering Information: See Page 3
- Weight: 0.001 grams

Ordering information

Device	Marking	Shipping
SXBZT2F5V6	ZL	10000/Tape&Reel

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic		Symbol	Value	Unit
Forward Voltage (Note 3)	@ I_F = 10mA	V_F	0.9	V
Operating and Storage Temperature Range		T_j, T_{STG}	-65 to +150	°C

Notes:
1. No purposefully added lead.
2. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
3. Short duration pulse test used to minimize self-heating effect.

Thermal Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation	P_d	250	mW
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	500	°C/W

Electrical Characteristics @ T_A = 25 C unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Zener Voltage	V_Z	I_{ZT} = 5mA	4.9	5.1	5.6	V
Maximum Zener Impedance	Z_{ZT}	I_{ZT} = 5mA	-	-	55	Ω
Maximum Zener Impedance	Z_{ZK}	I_{ZK} =0.5mA	-	-	500	Ω
Reverse Leakage Current	I_R	V_R =4.2V	-	-	5	μA
Forward Voltage	V_F	I_F = 100mA	-	-	1.25	V
Max.Capacitance	C	V_R=4V, f = 1MHz	-	-	300	pF

Notes: 4. Short duration test pulse used to minimize self-heating effect.
5. f = 1kHz.

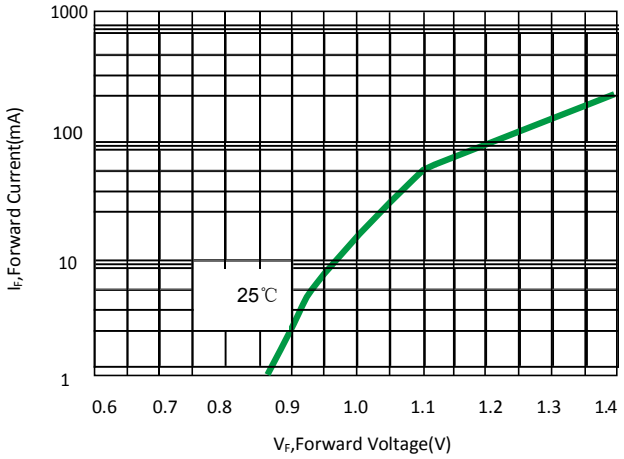


Fig 1.Typical Forward Voltage

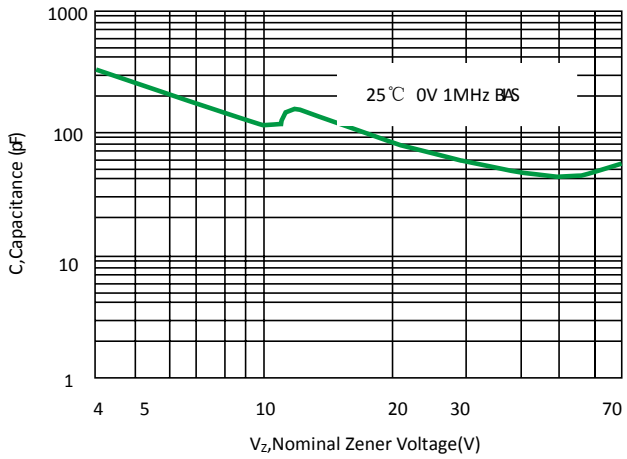


Fig 2. Typical Capacitance

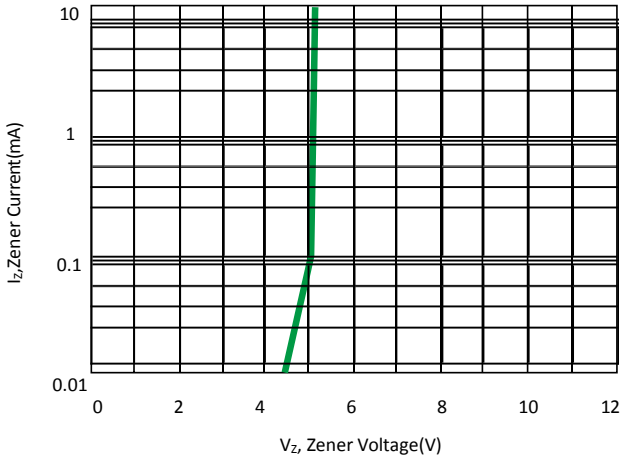


Fig 3.Zener Voltage versus Zener Current

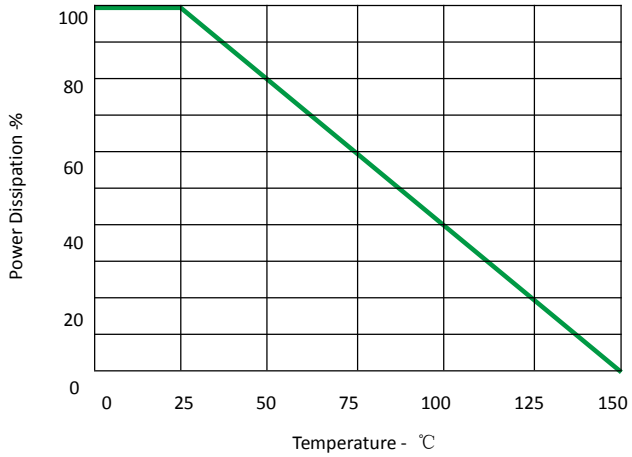
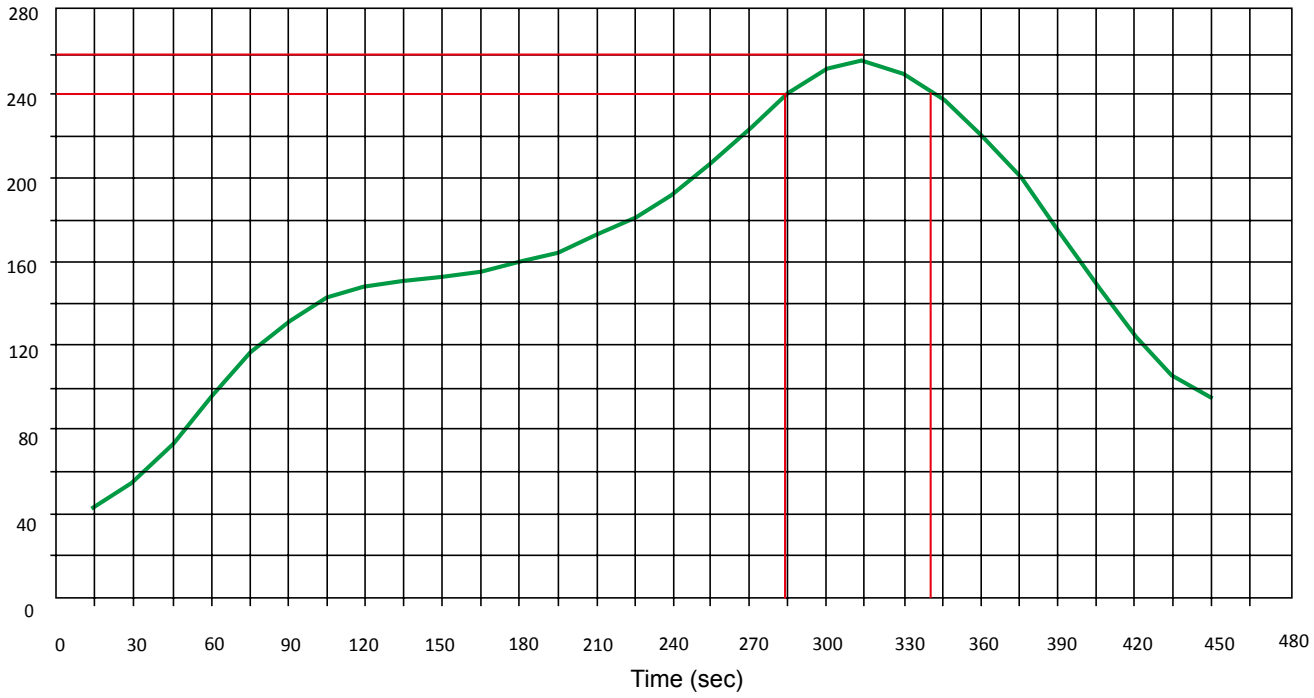
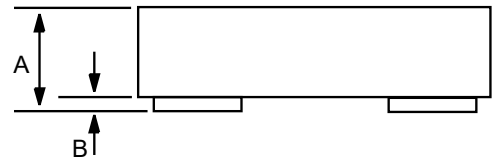


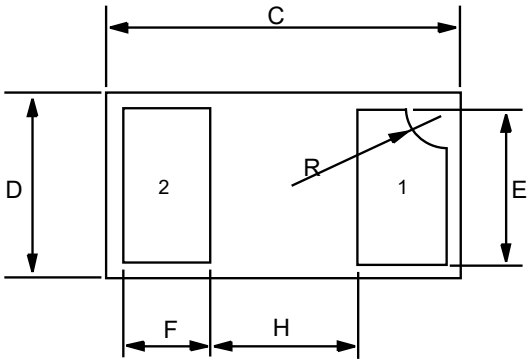
Fig 4.Steady State Power Detating

Solder Reflow Recommendation

Peak Temp=257℃, Ramp Rate=0.802deg. ℃/sec

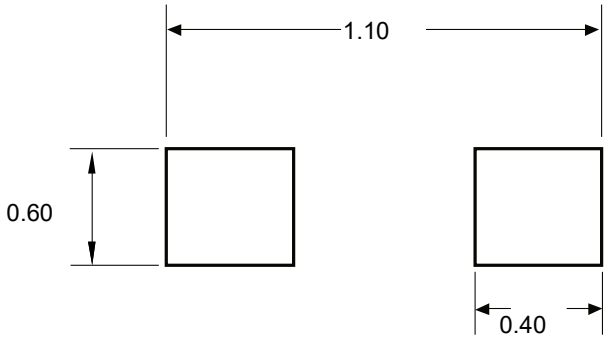






Bottom view

Dim	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.013	0.020	0.34	0.50
B	0.000	0.002	0.00	0.05
C	0.037	0.043	0.95	1.080
D	0.022	0.027	0.55	0.680
E	0.016	0.024	0.40	0.60
F	0.008	0.012	0.20	0.30
H	0.015Typ.		0.40Typ.	
R	0.001	0.005	0.05	0.15



Unit:mm

Suggested PCB Layout