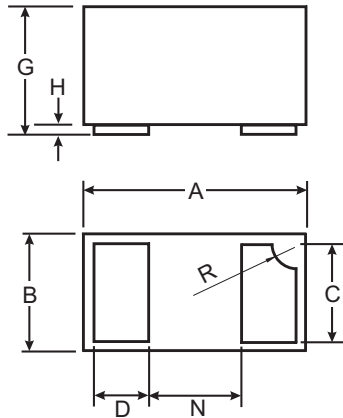


### Features

- Planar Die Construction
- Ultra-Small Leadless Surface Mount Package
- Ideally Suited for Automated Assembly Processes
- **Lead Free By Design/RoHS Compliant (Note 1)**
- "Green" Device (Note 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
- Terminals: Finish — NiPdAu annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208
- Marking & Type Code Information: 9C
- Ordering Information: See Last Page
- Weight: 0.001 grams



DFN1006-2			
Dim	Min	Max	Typ
A	0.95	1.05	1.00
B	0.55	0.65	0.60
C	0.45	0.55	0.50
D	0.20	0.30	0.25
G	0.47	0.53	0.50
H	0	0.05	0.03
N	—	—	0.40
R	0.05	0.15	0.10
All Dimensions in mm			

### Maximum Ratings @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 3) @ I <sub>F</sub> = 10mA	V <sub>F</sub>	0.9	V
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C
Peak Pulse Power (tp = 8 x 20 μs) (Note 4)	P <sub>pk</sub>	85	W
Peak Pulse Current (tp = 8 x 20 μs) (Note 4)	I <sub>pp</sub>	4.5	A
ESD Rating	Human Body Model	8	kV
	Machine Model	400	V
	IEC61000-4-2 Air Discharge	25	kV
	IEC61000-4-2 Contact Discharge	8	kV

- 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](http://www.diodes.com/products/lead_free/index.php).
  3. Short duration pulse test used to minimize self-heating effect.
  4. Part mounted on FR-4 PC board with recommended pad layout, as per <http://www.diodes.com/datasheets/ap02001.pdf>.

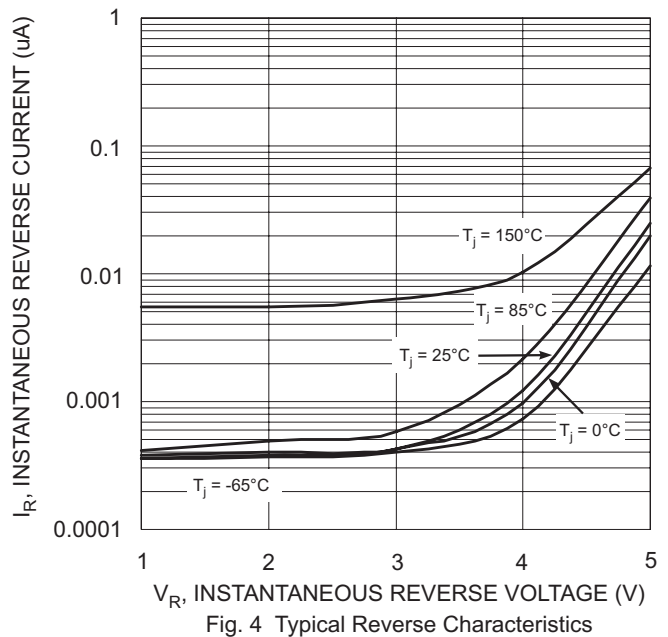
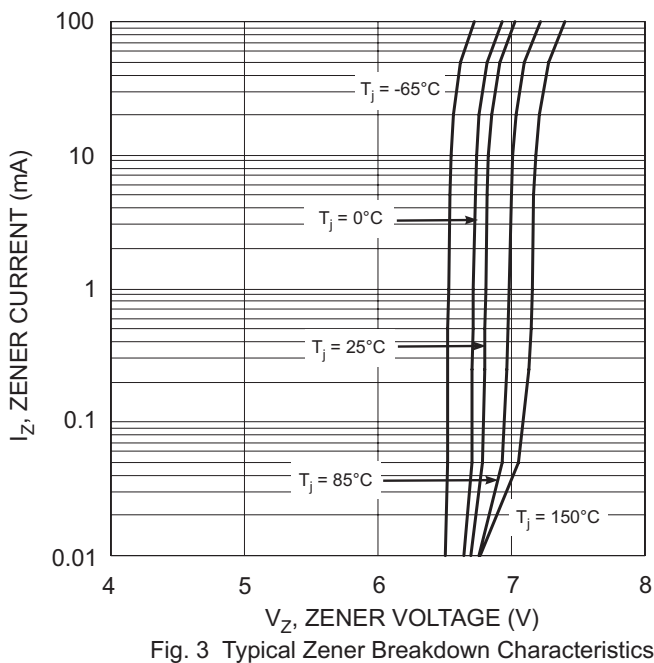
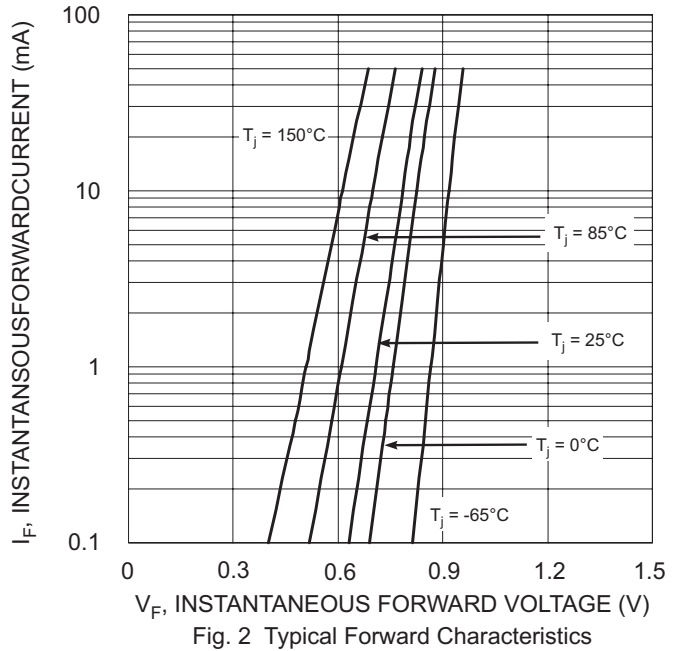
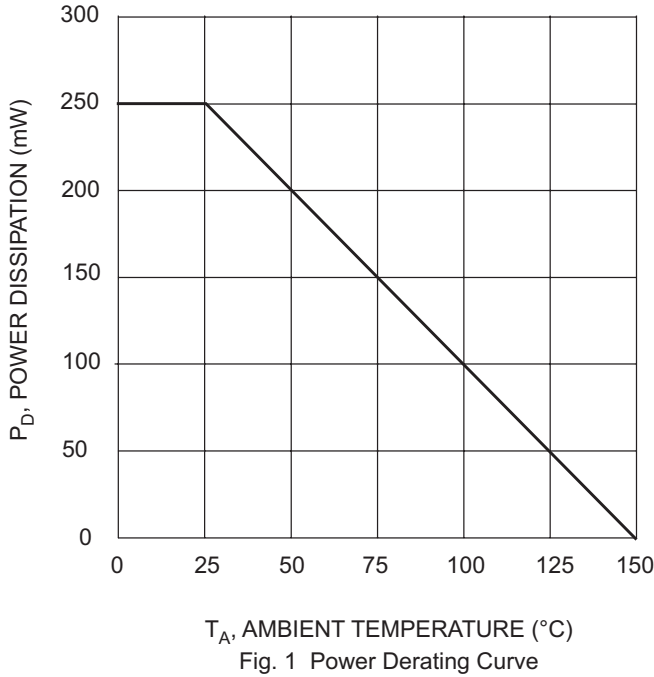
### Thermal Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 4)	P <sub>d</sub>	250	mW
Thermal Resistance, Junction to Ambient Air (Note 4)	R <sub>θJA</sub>	500	°C/W

**Electrical Characteristics** @  $T_A = 25^\circ\text{C}$  unless otherwise specified

Characteristic	Symbol	Value	Unit
Reverse Standoff Voltage	$V_{RWM}$	5	V
Breakdown Voltage @ $I_T = 5\text{mA}$ (Note 5)	$V_{BR}$	6.4	V
		7.2	
Maximum Reverse Leakage @ $V_{RWM}$	$I_R$	0.5	$\mu\text{A}$
Maximum Clamping Voltage @ $I_{pp} = 4.5\text{A}$ ( $t_p = 8 \times 20\mu\text{s}$ )	$V_C$	19	V
Typical Total Capacitance ( $V_R = 0\text{V}$ , $f = 1\text{MHz}$ )	$C_T$	65	pF

Notes: 5. Short duration test pulse used to minimize self-heating effect.



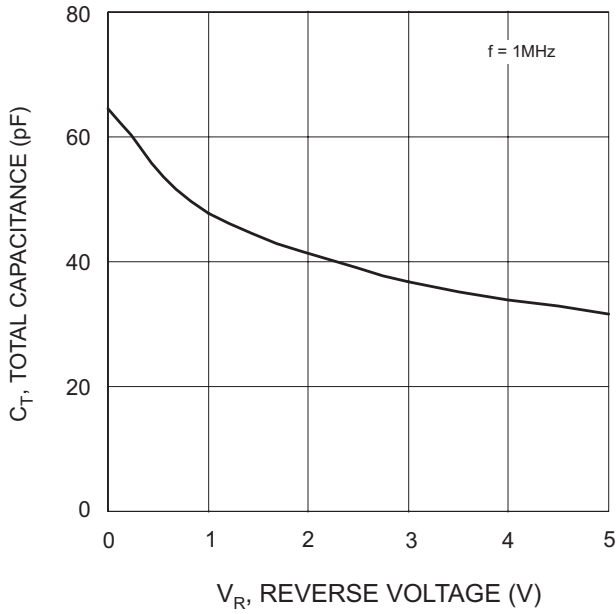


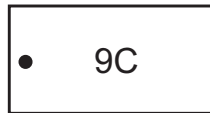
Fig. 5 Typical Total Capacitance

**Ordering Information** (Note 6)

Device	Packaging	Shipping
TPD6V8LP-7	DFN1006-2	3000/Tape & Reel

Notes: 6. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**



9C = Product Type Marking Code, Dot Denotes Cathode Side

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