

## Features

- Low turn-on voltage
- Fast switching
- Ultra-small surface mount package
- Lead free/RoHS compliant



DFN1006

## Mechanical Data

- Case material: molded plastic, "green" molding compound, compliant to UL flammability classification rating 94V-0
- Moisture sensitivity: level 1 per J-STD-020
- Terminal connections: cathode bar
- Terminals finish - NiPdAu annealed over copper lead frame solderable per MIL-STD-202, method 208
- Weight: 0.001 grams (approximately)



Schematic Diagram



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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse	V <sub>RRM</sub>	70	V
Voltage Working Peak Reverse	V <sub>RWM</sub>		
Voltage DC Blocking Voltage	V <sub>R</sub>		
Forward Continuous Current <sup>1</sup>	I <sub>FM</sub>	70	mA
Non-Repetitive Peak Forward Surge Current @ t<1.0s	I <sub>FSM</sub>	800	mA
Power Dissipation <sup>1</sup>	P <sub>D</sub>	430	mW
Thermal Resistance, Junction to Ambient Air <sup>1</sup>	R <sub>θJA</sub>	295	°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

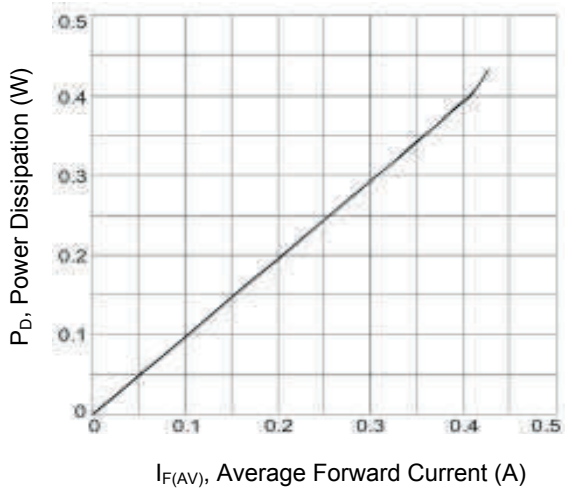
## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage <sup>2</sup>	V <sub>(BR)R</sub>	I <sub>R</sub> =10μA	70	-	-	V
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =1.0mA	-	-	400	mV
		I <sub>F</sub> =15mA	-	-	960	
Reverse Leakage Current <sup>2</sup>	I <sub>R</sub>	V <sub>R</sub> =50V	-	-	0.04	uA
		V <sub>R</sub> =70V	-	-	2	
Total Capacitance	C <sub>T</sub>	V <sub>R</sub> =0V, F=1.0MHz	-	2.0	-	pF
Reverse Recovery Time	T <sub>rr</sub>	I <sub>F</sub> =I <sub>R</sub> =10mA, I <sub>rr</sub> =0.1I <sub>R</sub>	-	-	5.0	nS

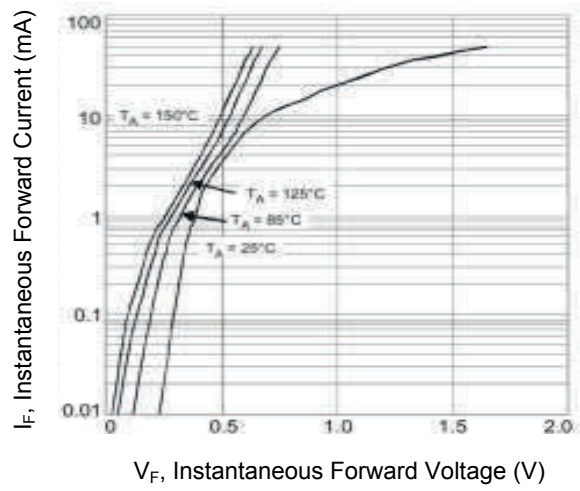
Notes:

1. Device mounted on FR-4 PC board with recommended pad layout
2. Short duration pulse test used to minimize self-heating effect.

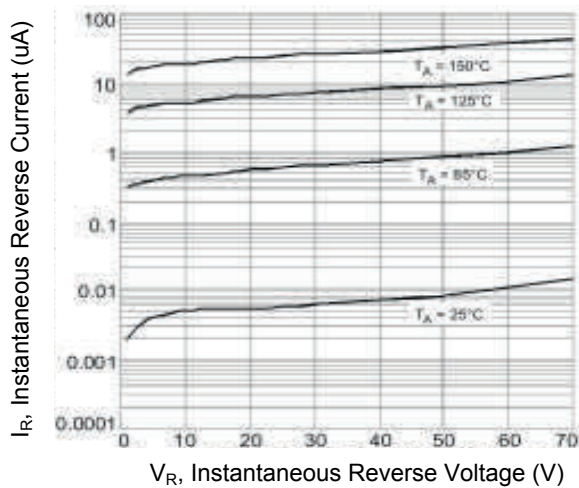
**Electrical Characteristic Curves** ( $T_A=25^\circ\text{C}$  unless otherwise specified)



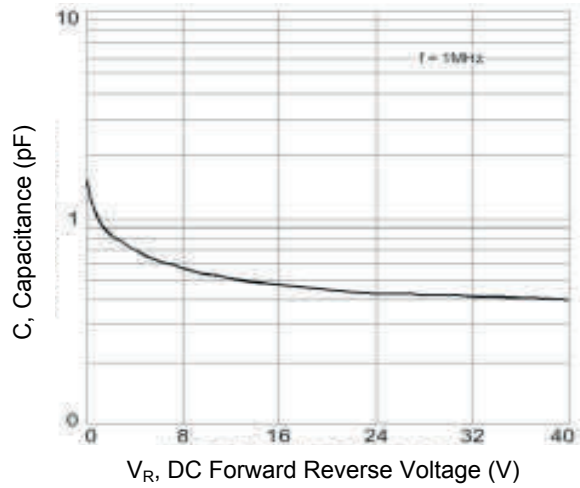
**Figure 1. Forward Power Dissipation**



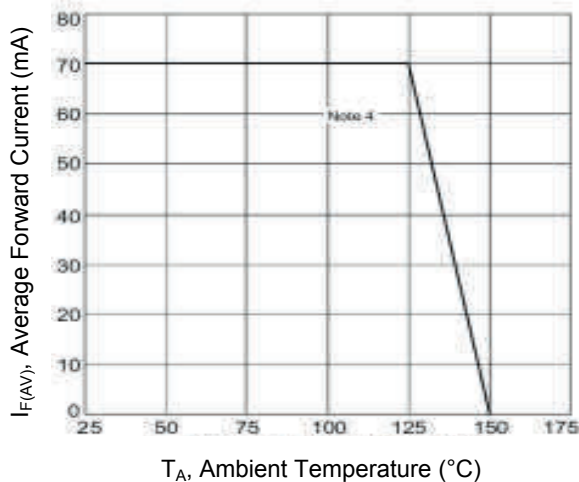
**Figure 2. Typical Forward Characteristics**



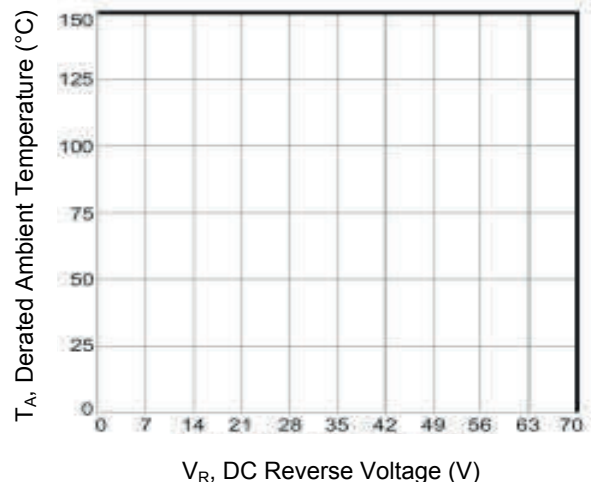
**Figure 3. Typical Reverse Characteristics**



**Figure 4. Total Characteristics VS. Reverse Voltage**

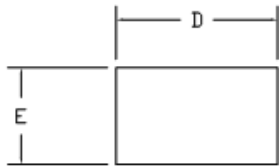


**Figure 5. Forward Current Derating Curve**

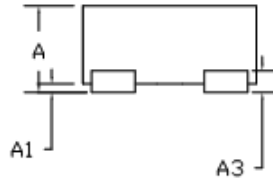


**Figure 6. Operating Temperature Derating**

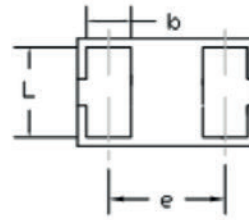
**Package Outline Dimensions (DFN1006-2)**



TOP VIEW



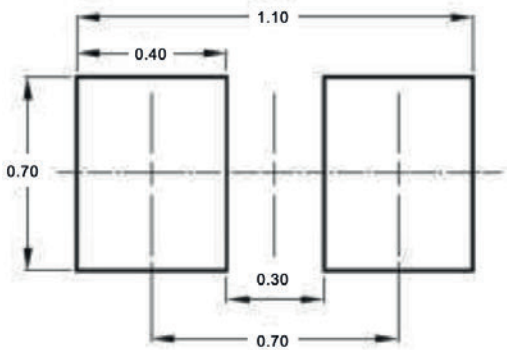
SIDE VIEW



BOTTOM VIEW

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.40	0.50	0.016	0.020
A1	0.00	0.05	0.000	0.002
A3	0.125 REF		0.005 REF	
D	0.95	1.05	0.037	0.041
E	0.55	0.65	0.022	0.026
b	0.20	0.30	0.008	0.012
L	0.45	0.55	0.018	0.022
e	0.65 BSC		0.026 BSC	

**Recommended Pad Layout**



Unit: mm

**Order Information**

Device	Package	Marking	Quantity	HSF Status
BAS5711LP	DFN1006	*N (* various by lot)	10,000 pcs / Reel	RoHS Compliant