

DFN1006 Plastic-Encapsulate Diodes

Schottky barrier Diode

FEATURES

- ◆ Small mold type: DFN1006
- ◆ Low IR
- ◆ High reliability



DFN1006

Applications

- ◆ Low voltage rectification
- ◆ High efficiency DC-to-DC conversion
- ◆ Switch Mode Power Supply (SMPS)
- ◆ Reverse polarity protection
- ◆ Low power consumption applications

Maximum Rating @ Ta =25°C unless otherwise specified

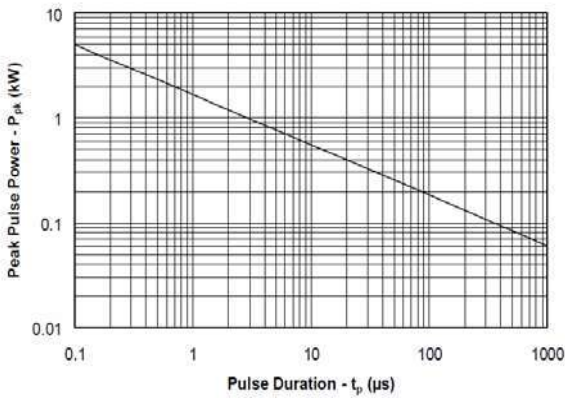
Symbol	Parameter	Ratings	Units
V _{RM}	Reverse voltage (DC)	30	V
I _o	Average rectified forward current	100	mA
I _{FSM}	Forward current surge peak (60Hz 1cyc)	0.5	A
T _J	Operating Temperature	-55 to +125	°C
T _{STG}	Storage Temperature	-55 to +125	°C

Electrical Characteristics@ Ta=25°C unless otherwise

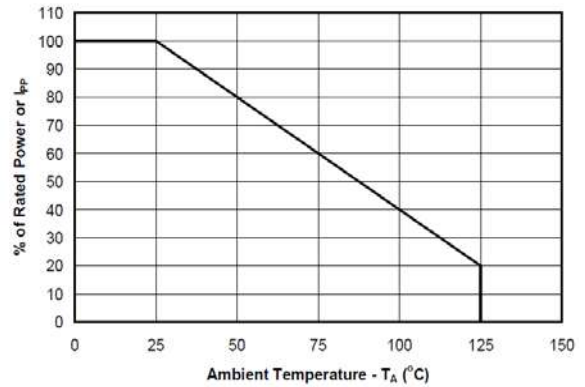
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V _R	Reverse Working Voltage	I _R =1mA	30			V
V _F	Forward voltage	I _F =10mA		0.33	0.38	V
V _F	Forward voltage t	I _F =100mA		0.50	0.55	V
I _R	Reverse current			3	5	μA

Typical Characteristics@ Ta=25°C unless otherwise specified

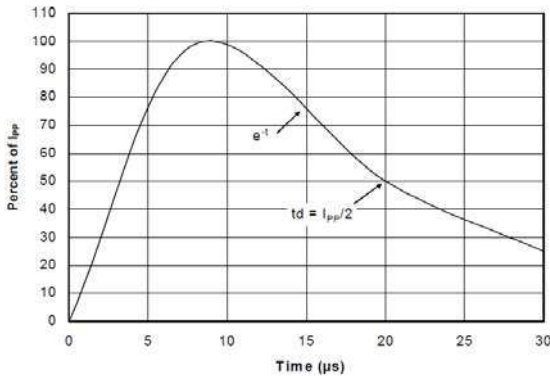
Non-Repetitive Peak Pulse Power vs. Pulse Time



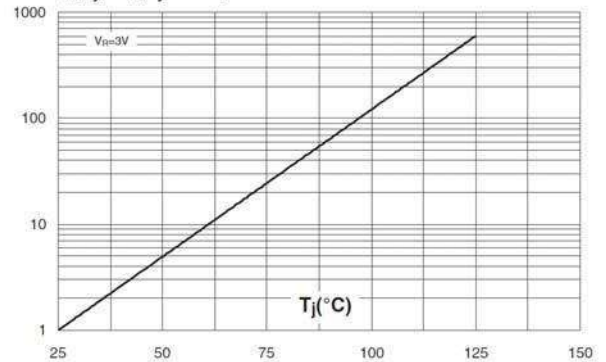
Power Derating Curve



Pulse Waveform

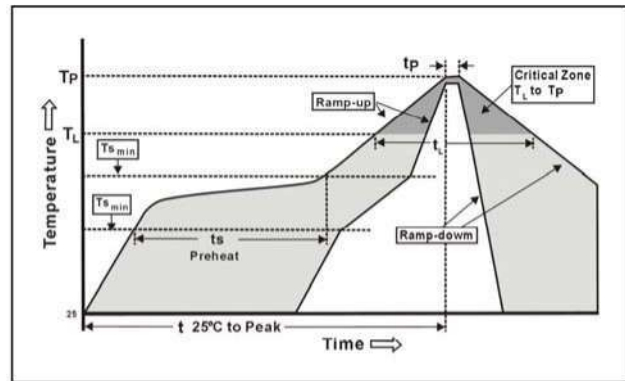


I_R[T_J] / I_R[T_J=25°C]



Soldering Parameters

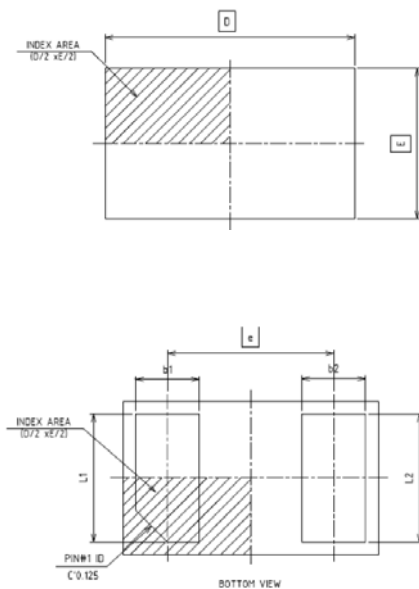
Reflow Condition		Fb – Free assembly
Pre Heat	- Temperature Min ($T_{s(Min)}$)	150°C
	- Temperature Max ($T_{s(Max)}$)	200°C
	- Time (Min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus) Temp (T_L) to peak		3°C/second Max
$T_{s(Max)}$ to T_L - Ramp-up Rate		3°C/second Max
Reflow	- Temperature (T_L) (Liquidus)	217°C
	- Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_p)		250 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second Max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		260°C



Package Outline

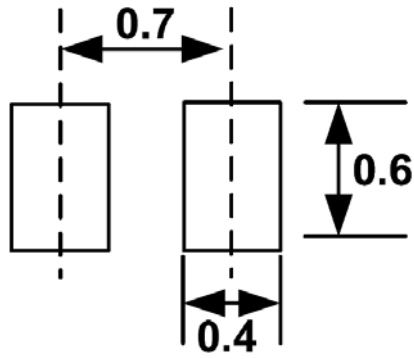
Plastic surface mounted package

DFN1006



Symbol	Dimensions in mm		
	Min	Nom	Max
A	0.450	0.500	0.550
A1	0.000	0.002	0.050
D	0.950	1.000	1.050
E	0.550	0.600	0.650
e		0.650	
b1	0.200	0.250	0.300
b2	0.200	0.250	0.300
L1	0.450	0.500	0.550
L2	0.450	0.500	0.550

Soldering Footprint



Package And Marking Information

Device	Package	Shipping	Reel Size
RB521MS-30	DFN1006	10000/Reel	7 inch