GOOD-ARK
SEMICONDUCTOR

GS2005EL
Schottky Barrier Diode

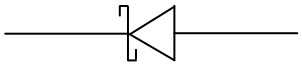
Features

- Low profile, small footprint
- Low forward voltage
- Forward current: 0.5A
- Reverse voltage: 20V
- MSL: Level 1

Package: DFN1006-2L

Applications

- Ultra high-speed switching
- Voltage clamping
- Protection circuits
- Low voltage rectification
- High efficiency DC-to-DC conversion
- Low power consumption applications



Schematic Diagram

Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for Switching Power Supply, Home Appliances, Office Equipment and Industrial Automation applications .

Description

Planar Maximum Efficiency General Application (MEGA) schottky barrier diode with an integrated guard ring for stress protection encapsulated in a DFN1006-2 small package.

Absolute Maximum Ratings

(T_A=25°C unless otherwise specified)

Parameter	Symbols	Conditions	Min	Max	Units
Continuous Reverse Voltage	V_{RRM}			20	V
Repetitive Peak Forward Current	I_{FRM}	$t_p \leq 1ms$; $\delta \leq 0.25$		2.5	A
Continuous Forward Current	I_F			0.5	A
Non-repetitive Peak Forward Current	I_{FSM}	t=8ms square wave		3.0	A
Junction Temperature	T_J			150	°C
Operating Ambient Temperature	T_{AMB}		-65	+150	°C
Storage Temperature	T_{STG}		-65	+150	°C

Notes: For Schottky barrier diodes thermal run-away has to be considered, as in some applications the reverse power losses PR are a significant part of the total power losses. Nomograms for determining the reverse power losses PR and $I_{F(AV)}$ rating will be available on request.

Electrical Characteristics

(T_A=25°C unless otherwise specified)

Parameter	Symbols	Conditions	Typ	Max	Units
Continuous Forward Voltage	V_F	I_F=0.1mA	125	190	mV
		I_F=1mA	185	240	mV
		I_F=10mA	250	310	mV
		I_F=100mA	325	420	mV
		I_F=500mA	450	650	mV
Continuous Reverse Current	I_R	V_R=10V	4	30	μA
		V_R=20V	10	100	μA
Diode Capacitance	C_d	V_R=1V;f=1MHz	24		pF

Pulse test:tp≤300μs; δ≤0.02

Typical Performance Curves

Fig.1 Forward current as a function of forward Voltage;typical values

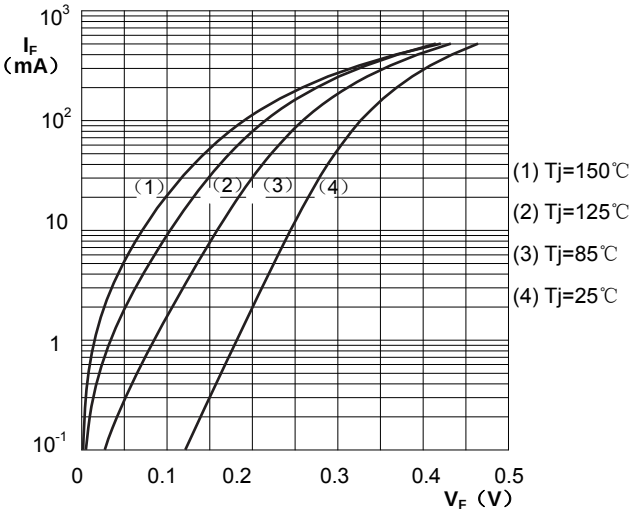


Fig.2 Reverse current as a function of reverse voltage;typical values

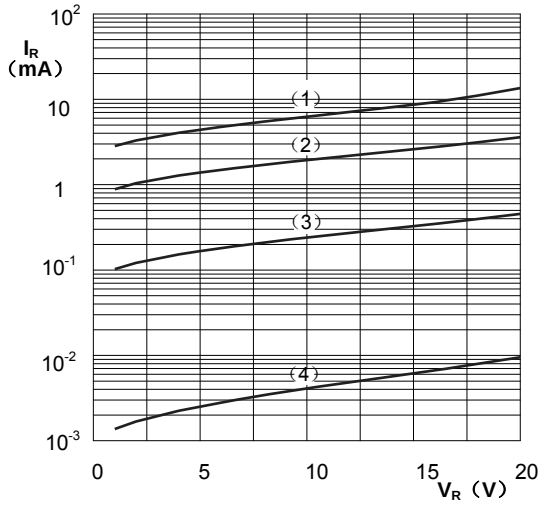
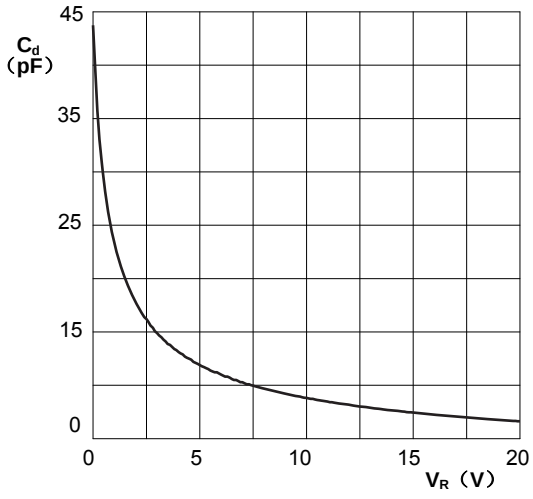
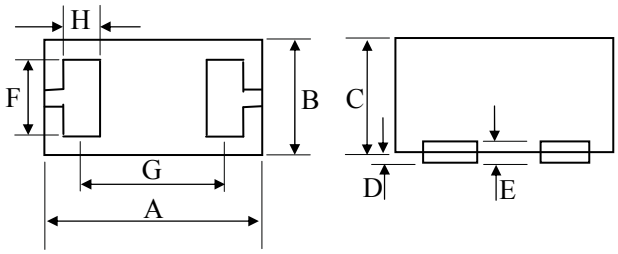


Fig.3Diode capacitance as a function of reverse Voltage;typical values



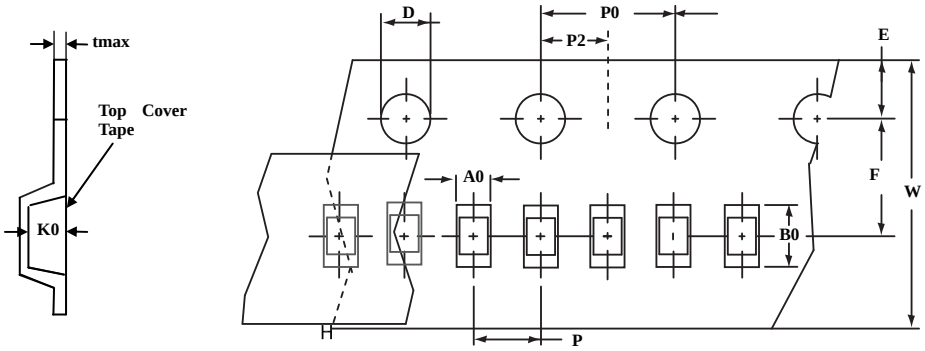
f =1 MHz; T_{amb}=25℃

Package Outline Dimension



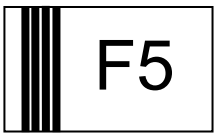
Dim	millmeters	
	min	max
A	0.95	1.05
B	0.55	0.65
C	0.45	0.55
D	0.00	0.05
E	0.125REF	
F	0.45	0.55
G	0.60BSC	
H	0.20	0.30

Taping Information



A0	B0	K0	D	E	F	W	P0	P2	P	tmax
0.7±0.05	1.1± 0.05	0.42±0.05	1.55±0.05	1.75±0.1	3.5±0.05	8.0± 0.2	4.0± 0.1	2.0± 0.05	2.0±0.05	0.25

Marking



Order Information

Device	Package	Net Weight	Carrier	Quantity	HSF Status
GS2005EL	DFN1006-2	0.001g	Tape & Reel	8000pcs/Reel	RoHS compliant