

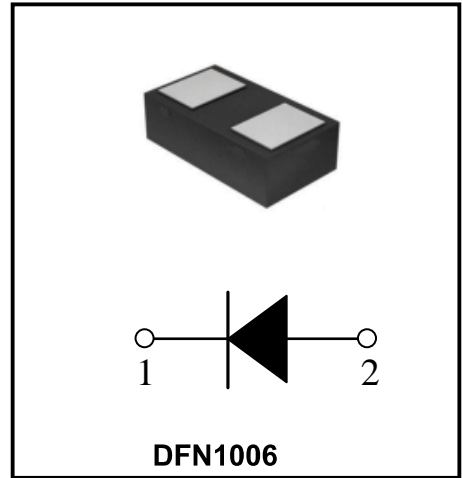
Schottky Barrier Diode

Features

- Extremely Small Surface Mount Package
- 200mA Average Rectified Forward Current
- Extremely Fast Switching Speed
- Low Forward Voltage
- High Reliability

Application

- High Speed Switching
- Low Current Rectification
- Inverse Polarity Protection



Order Information

Part Number	Marking	Package	Size (mm)	Delivery Form	Delivery Quantity
RB521BS-30	F	DFN1006	1.00x0.60x0.40	7" T&R	10,000 PCS/Tape

Limiting Values(TA = 25 °C, unless otherwise specified)

Symbol	Parameter	Limits Unit	Unit
V_{RM}	Reverse Voltage(Repetitive peak)	30	V
V_R	Reverse Voltage(DC)	30	V
I_o	Average Rectified Forward Current	200	mA
I_{FSM}	Peak Forward Surge Current	500	mA
T_j	Junction Temperature	125	°C
T_{stg}	Storage Temperature Range	-55~125	°C

Electrical Characteristics(TA = 25 °C unless otherwise specified)

Symbol	Parameter	conditions	Min	Typ.	Max	Unit
I_R	Reverse Current	V _R = 10V			30	μA
V_{BR}	Breakdown Voltage	I _T = 500μA	30			V
V_F	Forward Voltage	I _F = 10mA			0.35	V
		I _F = 20mA			0.38	V
		I _F = 100mA			0.4	V
		I _F = 200mA			0.5	V

Typical Characteristics

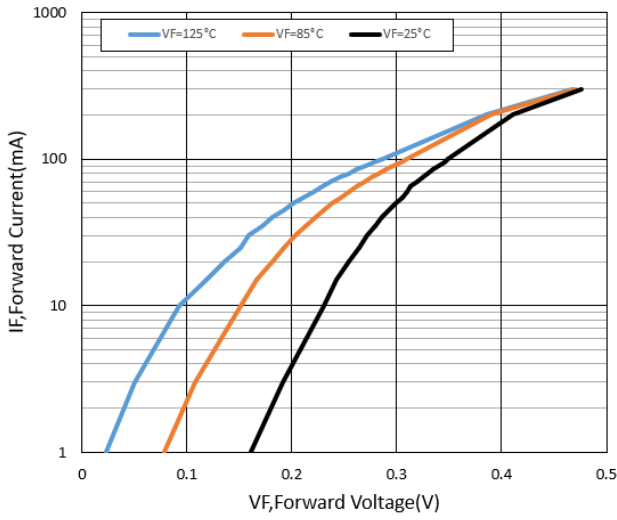


Fig.1 Forward Characteristics

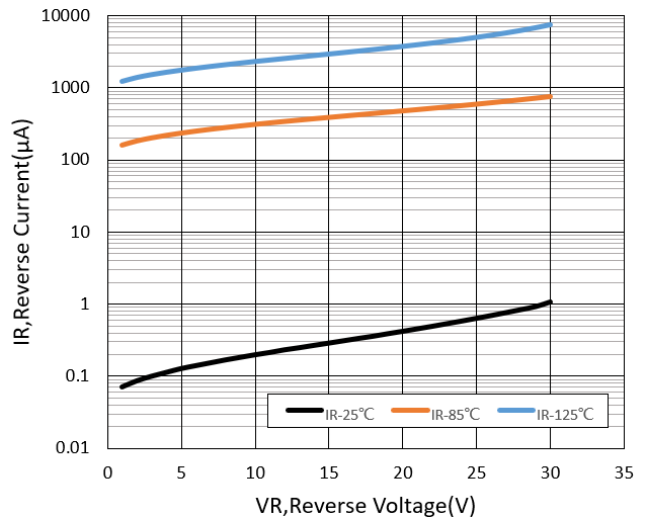


Fig.2 Reverse Characteristics

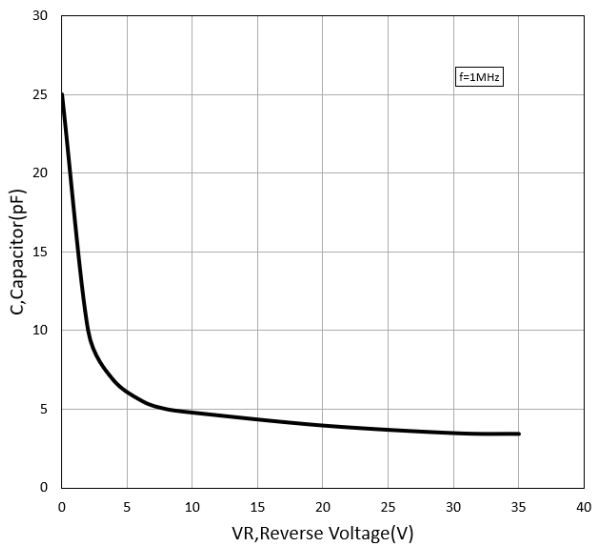
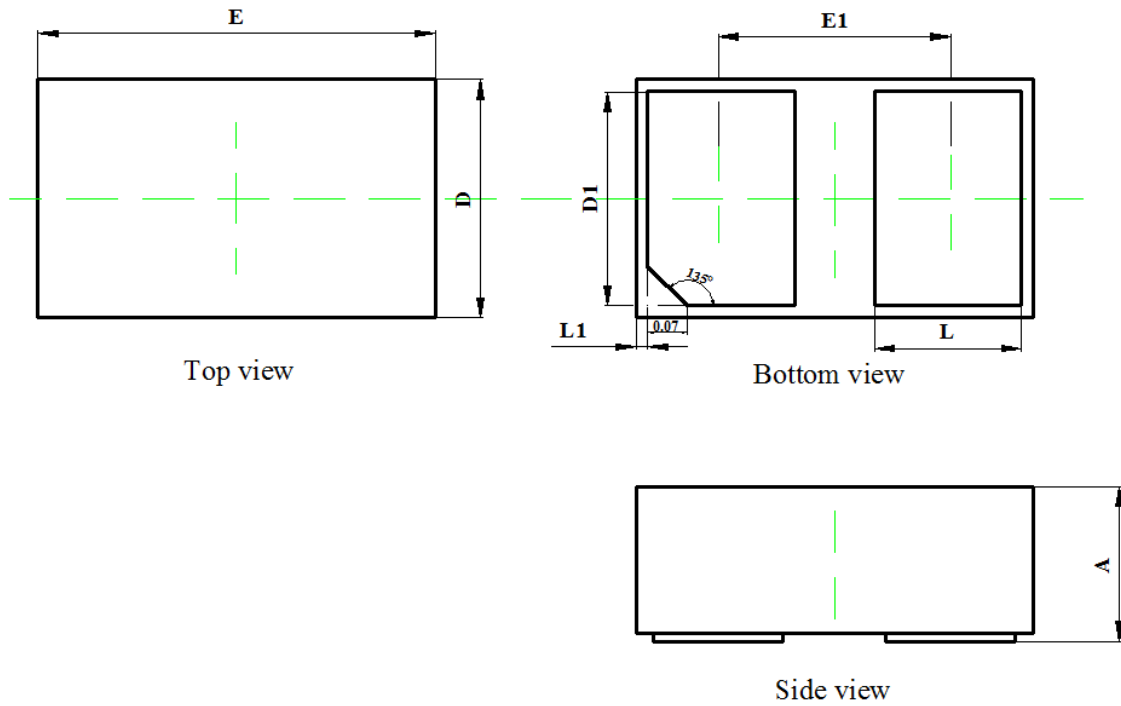


Fig.3 C-V Characteristics

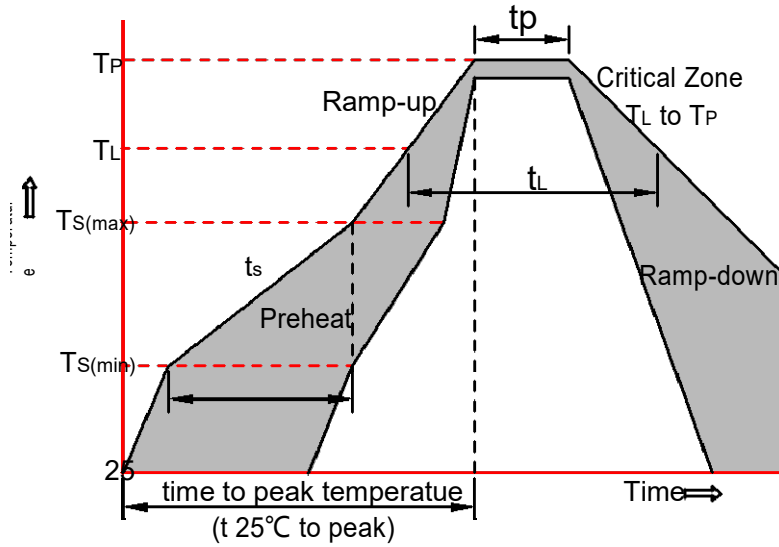
Package Outline

DFN1006



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.350	0.450	0.014	0.018
D	0.550	0.650	0.022	0.026
E	0.950	1.050	0.037	0.041
D1	0.420	0.520	0.017	0.020
E1	0.550	0.650	0.022	0.026
L	0.270	0.370	0.011	0.015
L1	0.000	0.100	0.000	0.004

Soldering Parameters



Reflow Condition		Pb-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 (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp (TP)		8 min. Max
Do not exceed		+260°C

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