PD010120EB(Bare Chip) / PD010120EW(Wafer)
1200V Silicon Carbide Diode

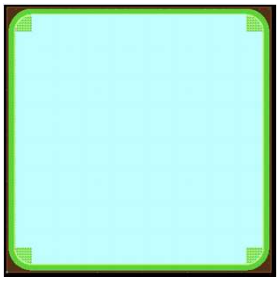
Features

- 1200-Volt Schottky Rectifier
- Shorter recovery time
- High-speed switching possible
- High-Frequency Operation
- Temperature-Independent Switching Behavior
- Extremely Fast Switching
- Positive Temperature Coefficient on VF
- RoHS Compliant

Applications

- Switch Mode Power Supplies
- Power Factor Correction
- Motor Drives
- HID Lighting

Chip Outline



- **Wafer Size** **100mm**
- **Thickness** **370±25 um**
- **Chip Size** **2,500um X 2,500um**
- **Anode Pad Size** **1,900um X 1,900um**
- **Anode Metalization** **Al 3um**
- **Cathode Metalization** **Ni/Ag 0.5um**

Absolute Maximum Ratings

Symbol	Parameter	Value	Units
V_{RRM}	Repetitive Peak Reverse Voltage	1200	V
V_{RSM}	Surge Peak Reverse Voltage	1200	V
V_{DC}	DC Blocking Voltage	1200	V
I_F	Continuous forward current T_C = 25˚C	10	A
I_{FSM}	Non-Repetitive Forward Surge Current T_C = 25˚C (PW=10ms sinusoidal)	50	A
T_J, Tstg	Operating Junction and Storage Temperature	-55 to +175	℃

Electrical Characteristics

T_C = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
V_F	Forward Voltage	I_F = 10A, T_C = 25°C	--	1.5	1.8	V
I_R	Reverse Current	V_R = 1200V T_C = 25°C	--	20	50	uA
Q_C	Total Capacitive Charge	V_R = 800V	--	36	--	nC
C	Total Capacitance	V_R = 1V, T_J = 25°C, f = 1MHz V_R = 800V, T_J = 25°C, f = 1MHz	--	650 45	--	pF

Typical Characteristics

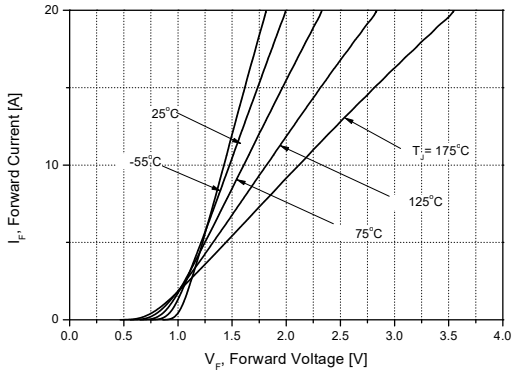


Figure 1. Forward Characteristics

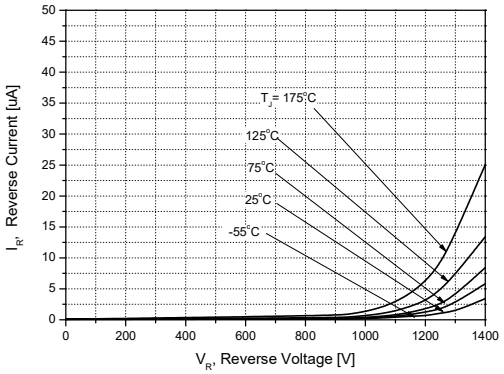


Figure 2. Reverse Characteristics

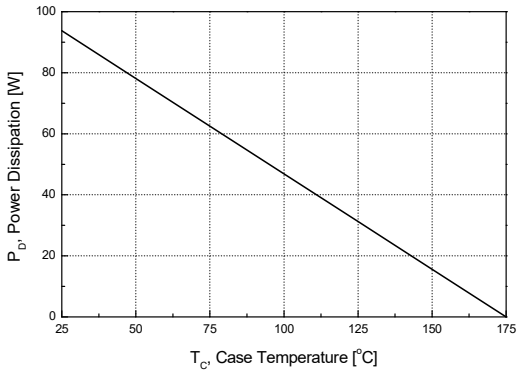


Figure 3. Power Dissipation

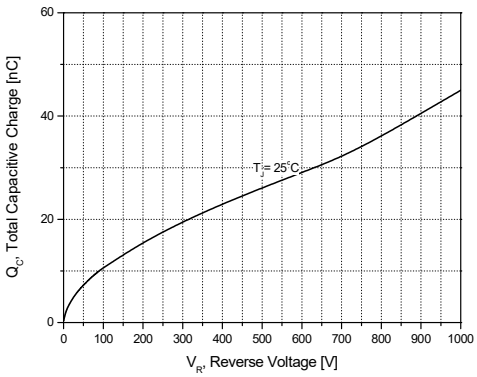


Figure 4. Total Capacitive Charge

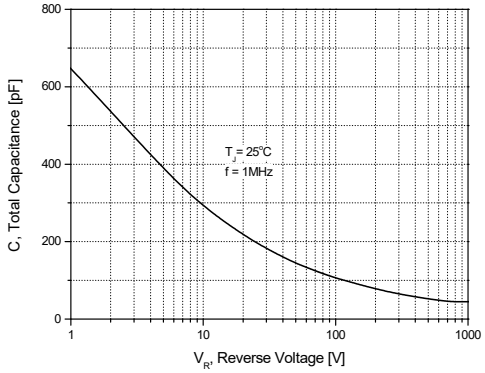


Figure 5. Total Capacitance

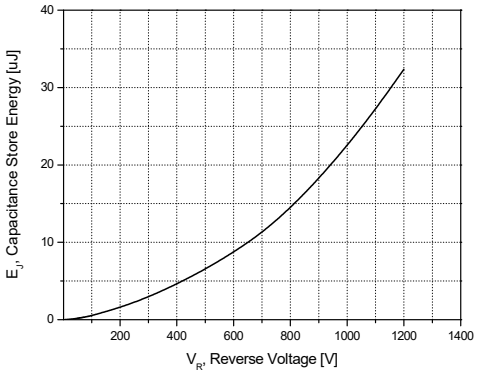
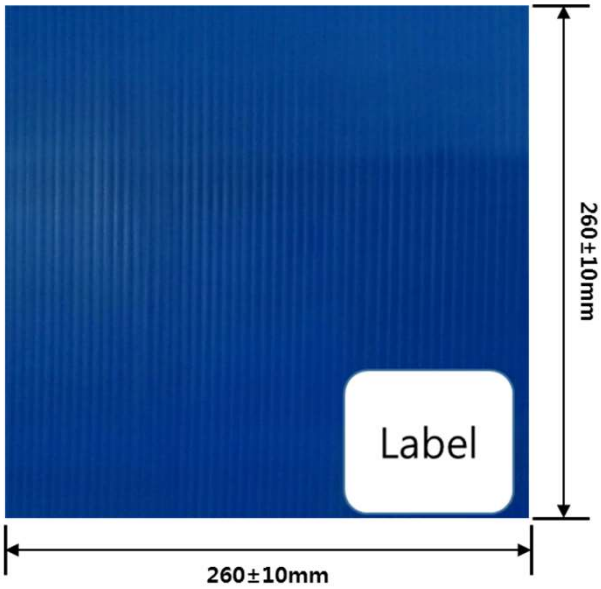


Figure 6. Capacitance Store Energy

Packing Information

Inner : Plastic PVC Sheet (Dicing Wafer)

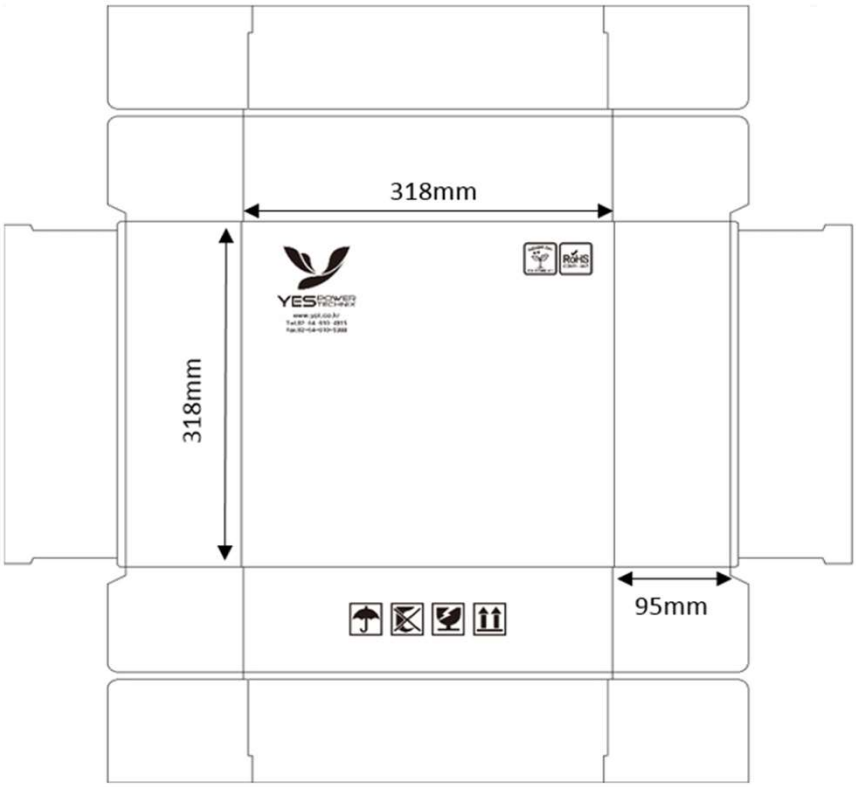


*** Label information**

Product Code	PDXXXXXXEB
Chip [ea]	XXX
Date	20XX . XX . XX .

YESPowertechnix.

Outer Box



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