

SCHOTTKY BARRIER RECTIFIERS

APD240

Features

- Low Forward Voltage Drop
- Very Small Conduction Losses
- High Surge Capability
- Surge Overload Rating up to 50A Peak Value

Applications

- Low Voltage High Frequency Inverters
- DC-DC Converters
- Free Wheeling
- Polarity Protection

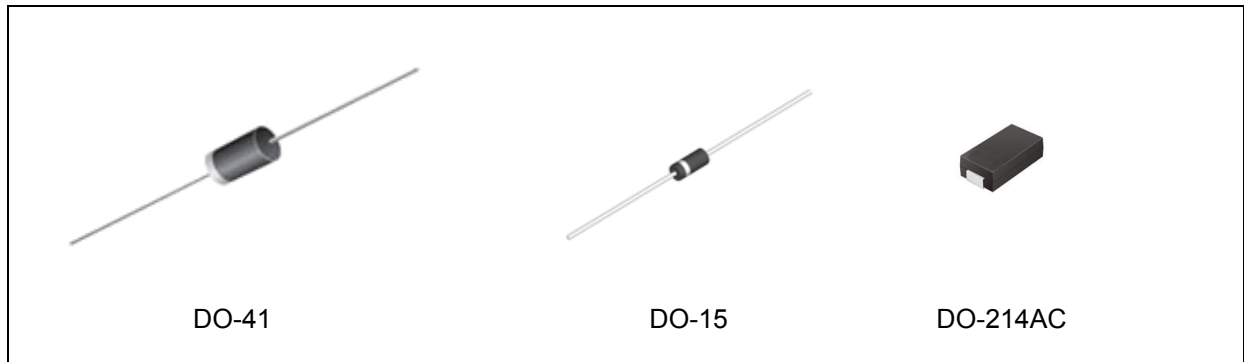


Figure 1. Package Types of APD240

Pin Configuration

VD/VG Package
(DO-41/DO-15)

VR Package
(DO-214AC)

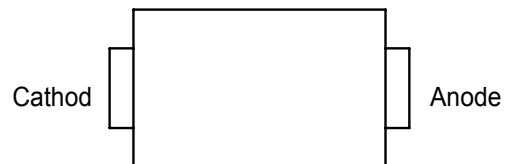
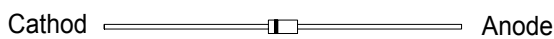


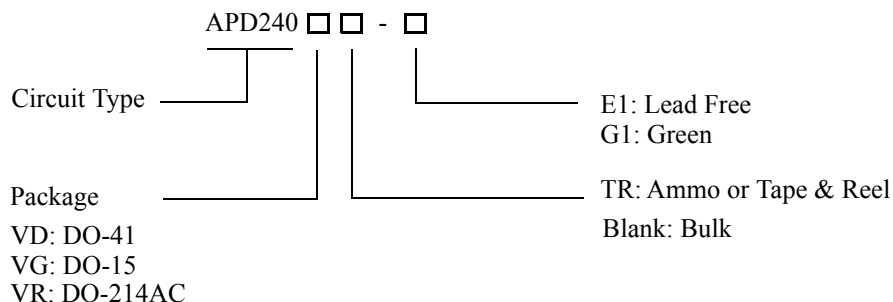
Figure 2. Pin Configuration of APD240



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Ordering Information



Package	Part Number		Marking ID		Packing Type
	Lead Free	Green	Lead Free	Green	
DO-41	APD240VD-E1	APD240VD-G1	D240VD	240VDG	Bulk
	APD240VDTR-E1	APD240VDTR-G1	D240VD	240VDG	Ammo
DO-15	APD240VG-E1	APD240VG-G1	D240VG	240VGG	Bulk
	APD240VGTR-E1	APD240VGTR-G1	D240VG	240VGG	Ammo
DO-214AC		APD240VRTR-G1		240VRG	Tape & Reel

BCD Semiconductor's Pb-free products, as designated with "E1" suffix in the part number, are RoHS compliant. Products with "G1" suffix are available in green packages.

**SCHOTTKY BARRIER RECTIFIERS****APD240****Absolute Maximum Ratings** ($T_A=25^{\circ}\text{C}$, unless otherwise noted) (Note 1)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Maximum DC Blocking Voltage	V_{DC}	40	V
Maximum RMS Voltage	V_{RMS}	28	V
Average Rectified Forward Current 0.375 " (9.5mm) Lead Length (See Figure 3)	$I_{F(AV)}$	2.0	A
Non-Repetitive Peak Forward Surge Current 8.3 ms Single Half Sine-Wave on Rated Load	I_{FSM}	50	A
Operating Junction Temperature Range	T_J	-65 to 125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-65 to 150	$^{\circ}\text{C}$

Note 1: Stresses greater than those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under "Recommended Operating Conditions" is not implied. Exposure to "Absolute Maximum Ratings" for extended periods may affect device reliability.



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Thermal Characteristics ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol		Values	Unit
Typical Thermal Resistance (Note 2)	θ_{JA}	DO-41/DO-15	52	$^{\circ}\text{C}/\text{W}$
		DO-214AC	90	
	θ_{JL}	DO-41/DO-15	23	

Note 2: Thermal resistance from junction to lead, PCB mounted, 0.375" (9.5mm) lead length.

Electrical Characteristics ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	Values	Unit
Forward Voltage @ $I_F=2.0\text{A}$	V_F	0.5	V
Reverse Current @ Rated V_R (Note 3)	I_R	$T_A=25^{\circ}\text{C}$	0.5
		$T_A=100^{\circ}\text{C}$	10

Note 3: Pulse Test: 300 μs pulse width, 1.0% duty cycle.

Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

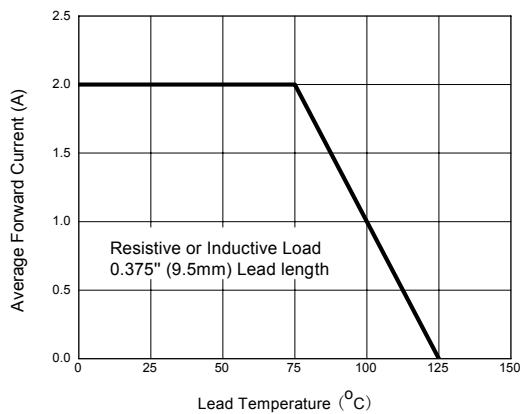


Figure 3. Forward Current Derating Curve

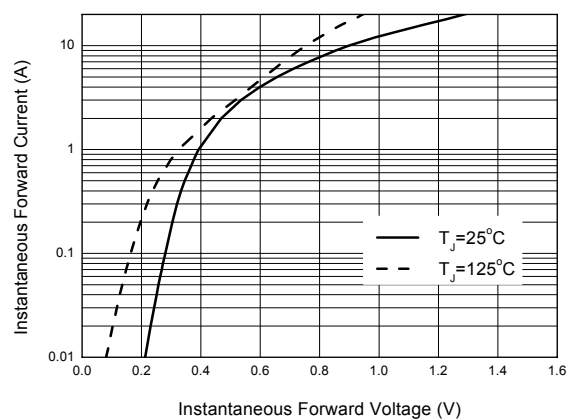


Figure 4. Typical Instantaneous Forward Characteristics



Typical Performance Characteristics (Continued)

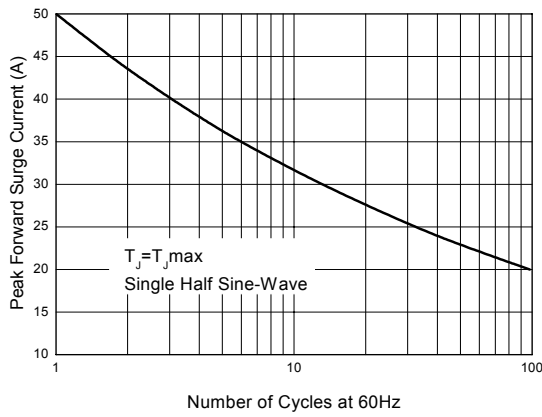


Figure 5. Maximum Non-Repetitive Peak Forward Surge Current

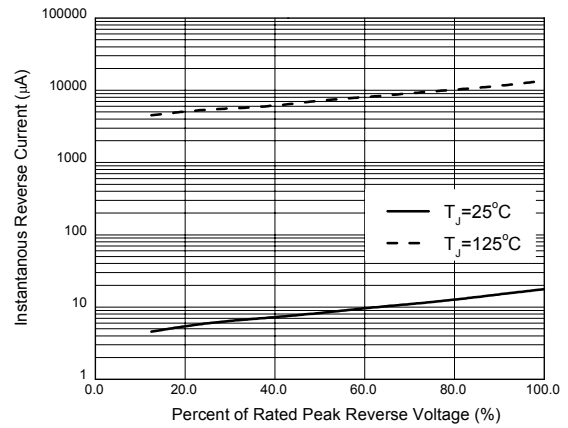


Figure 6. Typical Reverse Characteristics

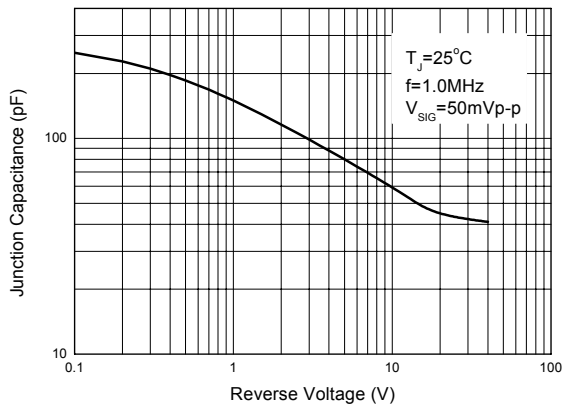


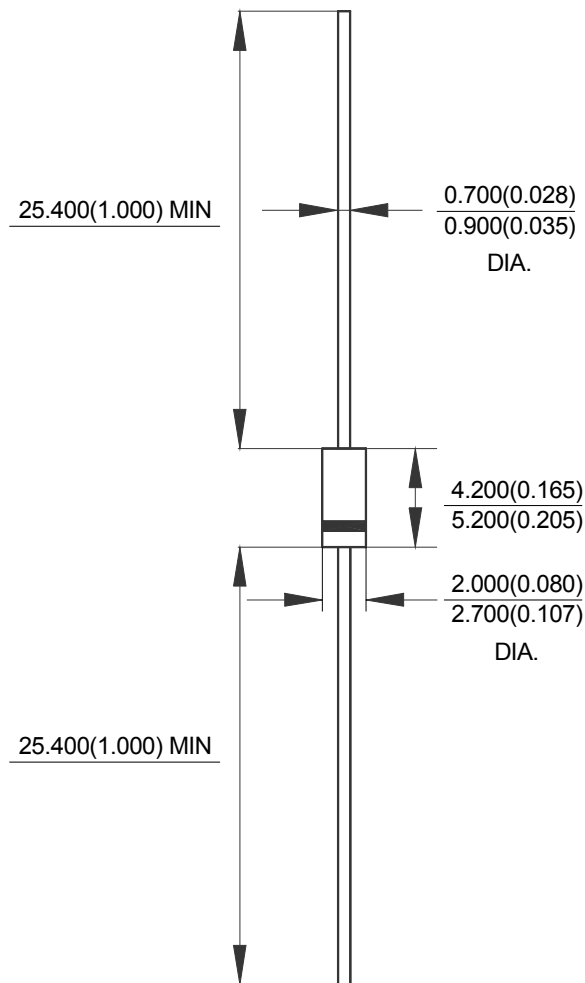
Figure 7. Typical Junction Capacitance



Mechanical Dimensions

DO-41

Unit: mm(inch)





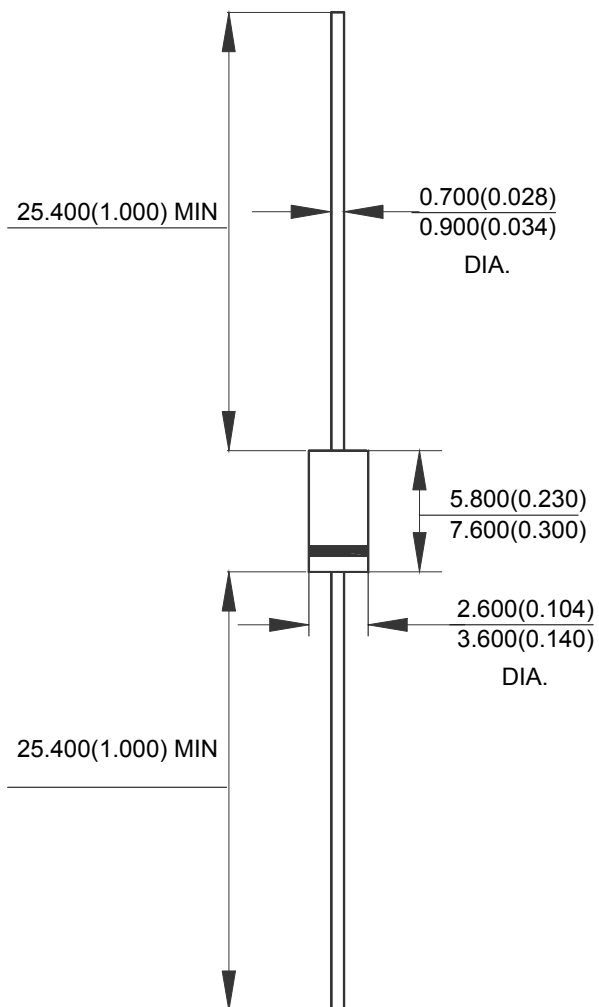
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Mechanical Dimensions (Continued)

DO-15

Unit: mm(inch)

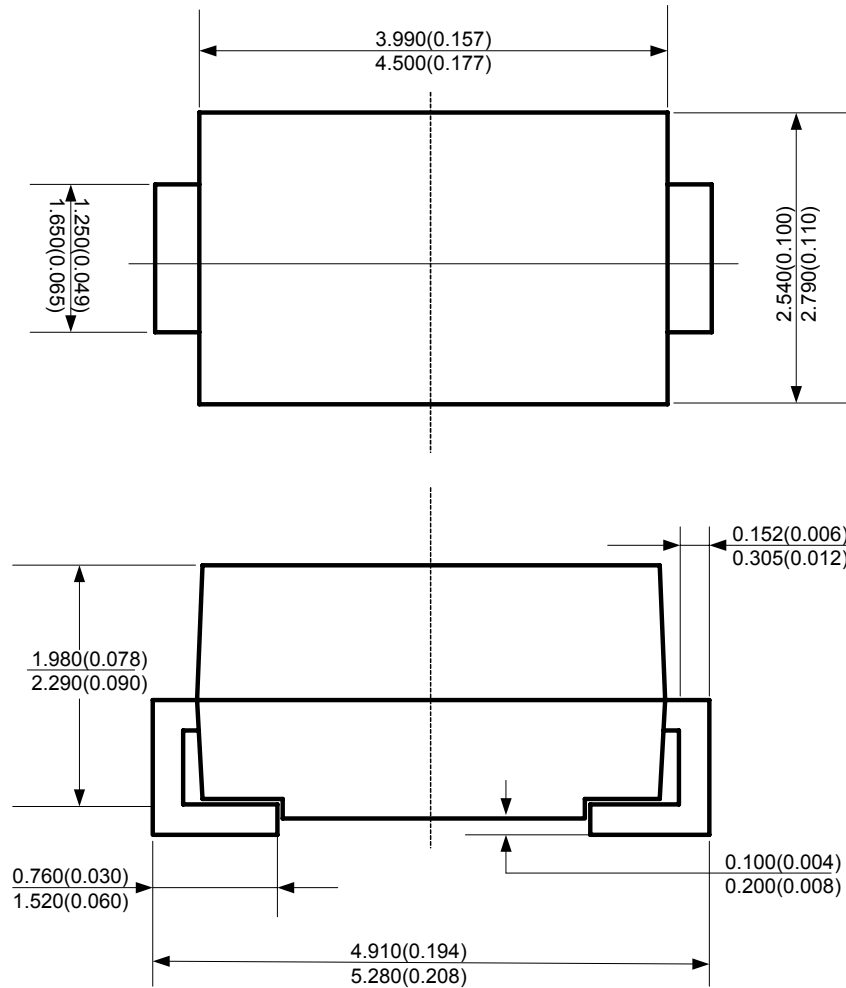




Mechanical Dimensions (Continued)

DO-214AC

Unit: mm(inch)





BCD Semiconductor Manufacturing Limited

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