



# BY251 - BY255

**PRV : 200 - 1300 Volts**  
**Io : 3.0 Amperes**

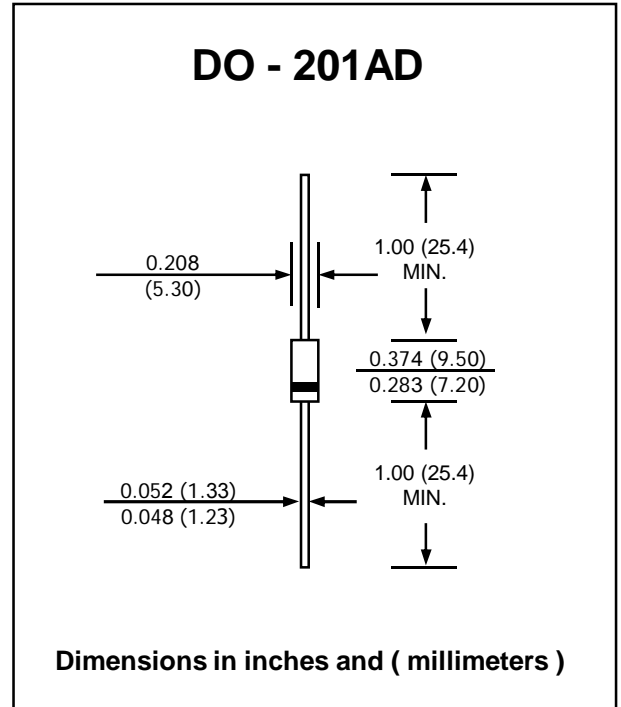
**FEATURES :**

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Pb / RoHS Free

**MECHANICAL DATA :**

- \* Case : DO-201AD Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.929 grams

## SILICON RECTIFIER DIODES



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

RATING	SYMBOL	BY251	BY252	BY253	BY254	BY255	UNIT
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	200	400	600	800	1300	V
Maximum RMS Voltage	V <sub>RMS</sub>	140	280	420	560	910	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	200	400	600	800	1300	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 50 °C	I <sub>F</sub>	3.0					A
Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	100					A
Maximum Forward Voltage at I <sub>F</sub> = 3.0 Amps.	V <sub>F</sub>	1.1					V
Maximum DC Reverse Current Ta = 25 °C at rated DC Blocking Voltage Ta = 100 °C	I <sub>R</sub>	20					μA
	I <sub>R(H)</sub>	50					μA
Typical Junction Capacitance (Note1)	C <sub>J</sub>	50					pF
Typical Thermal Resistance (Note2)	R <sub>θJA</sub>	18					°C/W
Junction Temperature Range	T <sub>J</sub>	- 65 to + 175					°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 175					°C

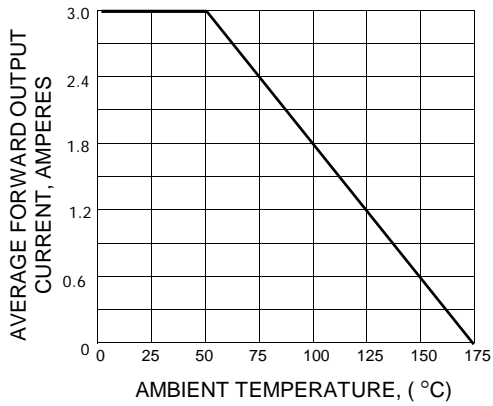
**Notes :**

- (1) Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
- (2) Thermal resistance from Junction to Ambient at 0.375" (9.5mm) Lead Lengths, P.C. Board Mounted.

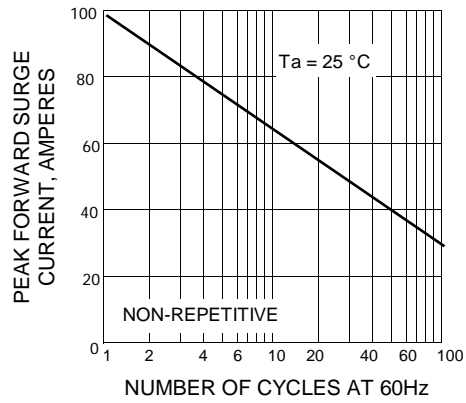


**RATING AND CHARACTERISTIC CURVES ( BY251 - BY255 )**

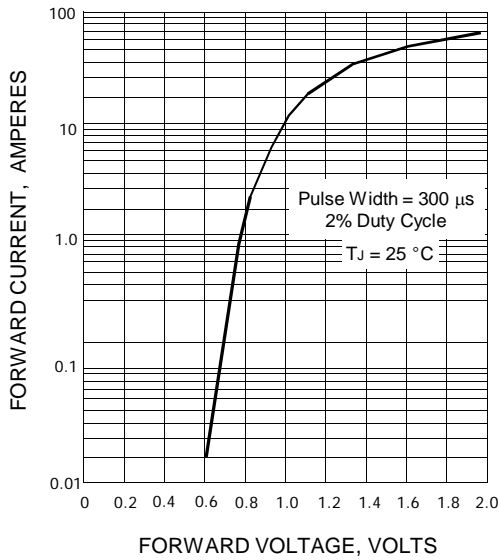
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



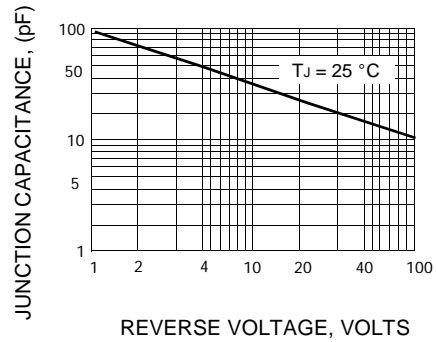
**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



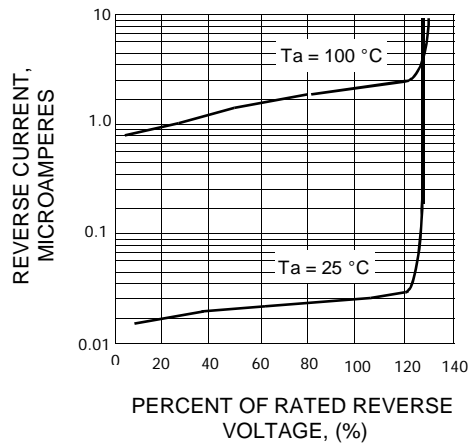
**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL JUNCTION CAPACITANCE**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**



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