

BY251 - BY255

PRV : 200 - 1300 Volts
Io : 3.0 Amperes

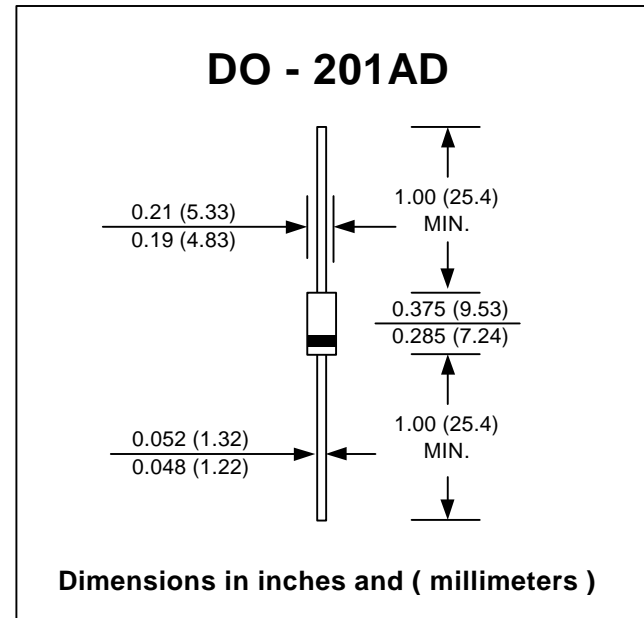
FEATURES :

- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop

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_{RRM}	200	400	600	800	1300	V
Maximum RMS Voltage	V_{RMS}	140	280	420	560	910	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	800	1300	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length $T_a = 50\text{ }^\circ\text{C}$	I_F	3.0					A
Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	I_{FSM}	100					A
Maximum Forward Voltage at $I_F = 3.0$ Amps.	V_F	1.1					V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at rated DC Blocking Voltage $T_a = 100\text{ }^\circ\text{C}$	I_R	20					μA
	$I_{R(H)}$	50					μA
Typical Junction Capacitance (Note1)	C_J	50					pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}$	18					$^\circ\text{C/W}$
Junction Temperature Range	T_J	- 65 to + 175					$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 65 to + 175					$^\circ\text{C}$

Notes :

- (1) Measured at 1.0 MHz and applied reverse voltage of 4.0V_{DC}
- (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

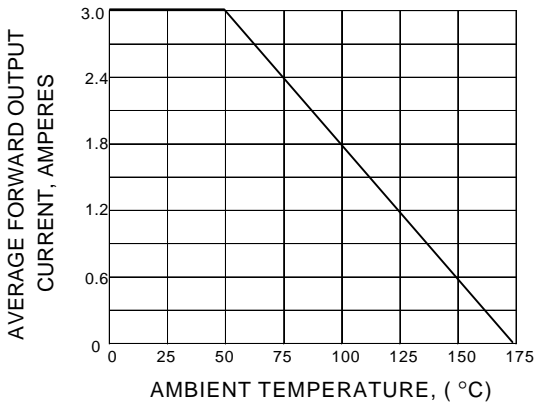


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

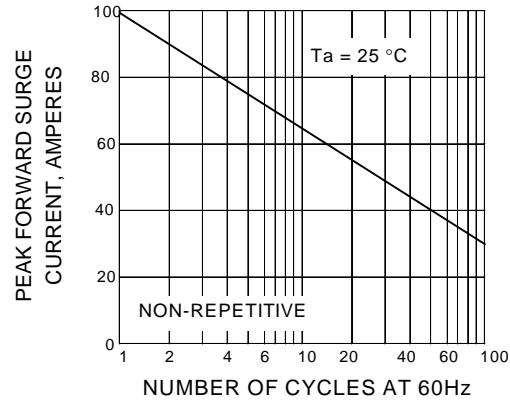


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

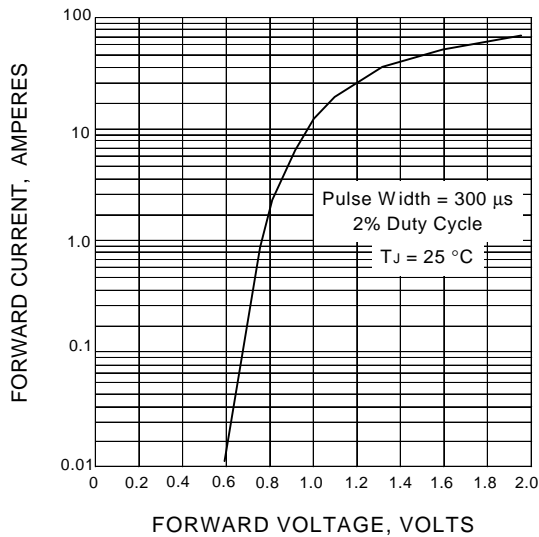


FIG.4 - TYPICAL JUNCTION CAPACITANCE

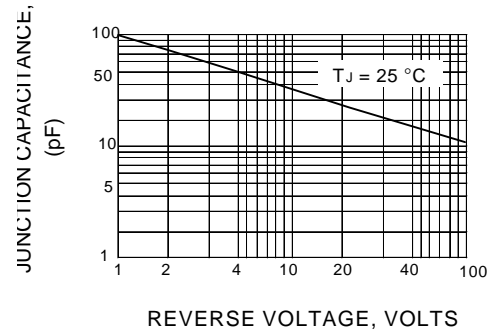
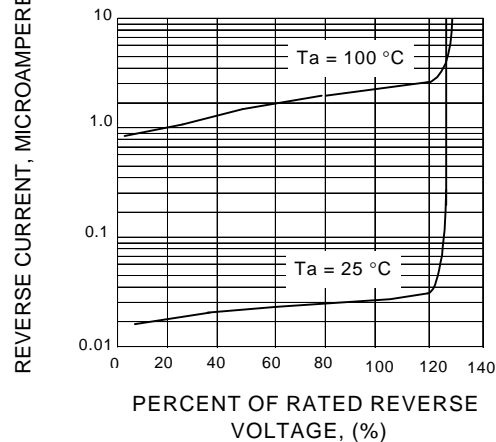


FIG.5 - TYPICAL REVERSE CHARACTERISTICS



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