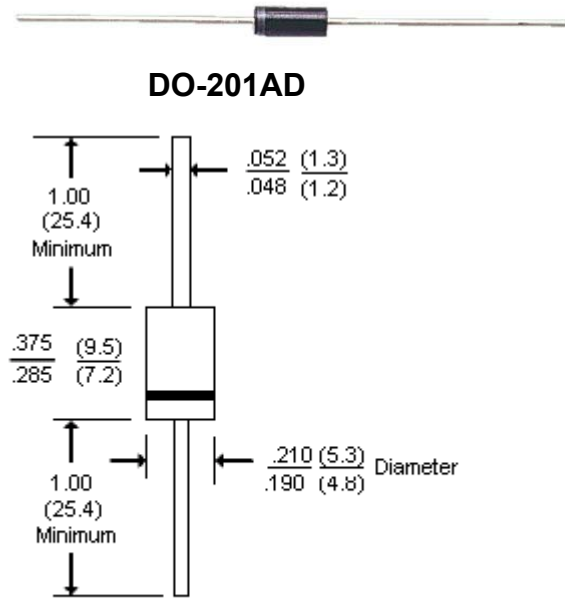


BY298 / BY299

Soft Recovery Rectifiers



Axial



Dimensions : Inches (Millimetres)

Features:

- High surge current capability.
- Void-free plastic package.
- 2.0 Ampere operation at $T_A = 55^\circ\text{C}$ with no thermal runaway.
- Fast switching for high efficiency.
- Exceeds environmental standards of MIL-S-19500/228.

Mechanical Data:

Case	: Moulded plastic DO-201AD.
Terminals	: Axial leads, solderable per MIL-STD-202, Method 208.
Polarity	: Band denotes Cathode end.
Mounting position	: Any.
Weight	: 0.04 ounce, 1.1 gram.

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Parameter	Symbols	BY298	BY299	Units
Maximum recurrent peak reverse voltage	V_{RRM}	400	800	Volts
Maximum RMS voltage	V_{RMS}	280	560	
Maximum DC blocking voltage	V_{DC}	400	800	
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{(AV)}$	2.0		Amps
Peak forward surge current 10ms single half sine-wave superimposed on rated load	I_{FSM}	70.0		
Maximum repetitive peak forward surge (Note 1)	I_{FRM}	10.0		
Maximum instantaneous forward voltage at 3.0A	V_F	1.3		V



BY298 / BY299

Soft Recovery Rectifiers



Parameter	Symbols	BY298	BY299	Units
Maximum DC reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	I_R	10.0 500		μA
Maximum reverse recovery time (Note 3) $T_J = 25^\circ\text{C}$	T_{RR}	150		ns
Typical junction capacitance (Note 2) $T_J = 25^\circ\text{C}$	C_J	28.0		pF
Typical thermal resistance (Note 4)	$R_{\theta JA}$	15.0		$^\circ\text{C/W}$
Operating temperature range	T_J	-50 to +125		$^\circ\text{C}$
Storage temperature range	T_{STG}	-50 to +150		

Notes:

1. Repetitive peak forward surge current at $f < 15\text{kHz}$.
2. Measured at 1MHz and applied reverse voltage of 4.0 volts.
3. Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$.
4. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length with both leads to heat sink.

Rating and Characteristics Curves

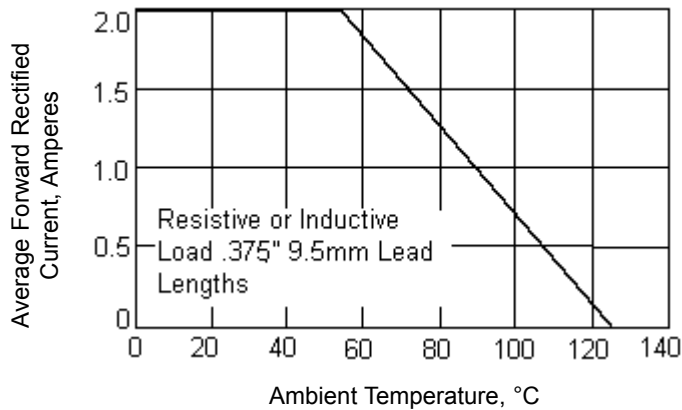


Figure 1 - Forward Current Derating Curve

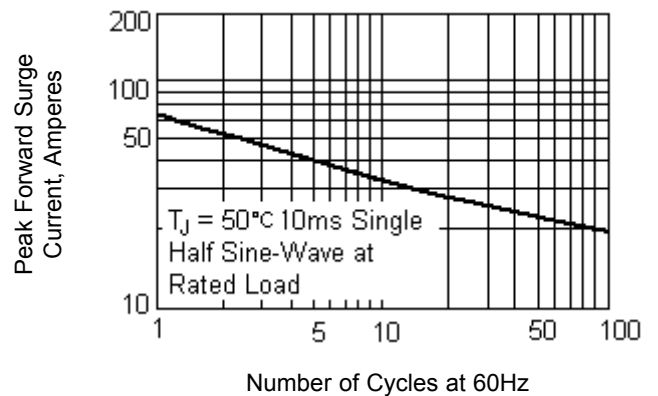


Figure 2 - Maximum Non-Repetitive Peak Forward Surge Current

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Soft Recovery Rectifiers

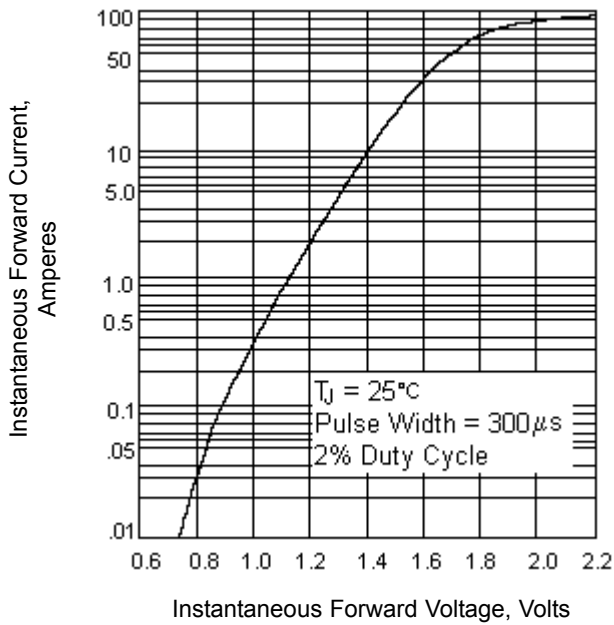


Figure 3 - Typical Instantaneous Forward Characteristics

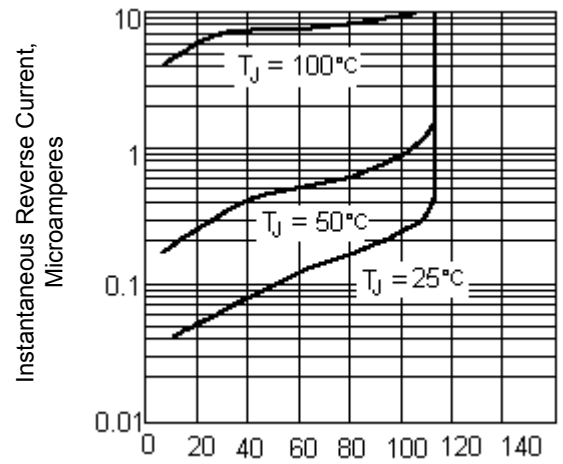


Figure 4 - Typical Reverse Characteristics

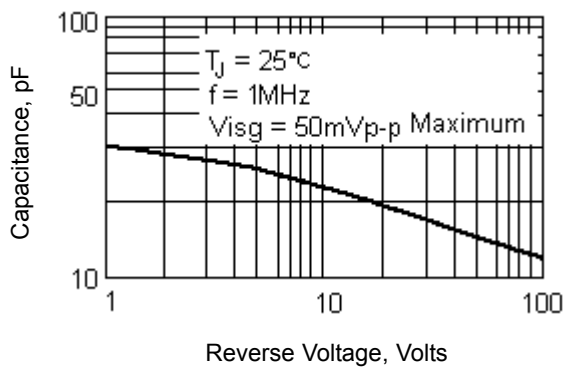


Figure 5 - Typical Junction Capacitance

Specifications

V_{RRM} maximum (V)	$I_{F(av)}$ (A)	I_{FSM} (A)	t_{rr} maximum (ns)	V_F (V) at $I_F = 3A$	Package	Length	Diameter	Part Number
800	2	70	150	1.3	DO-201AD	9.5	5.3	BY299
400								BY298

Dimensions : Millimetres



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Soft Recovery Rectifiers



Notes:

International Sales Offices:



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