

UG2A THRU UG2D

SUPER FAST RECTIFIERS

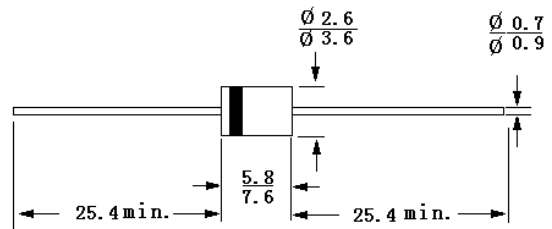
Reverse Voltage – 50 to 200 Volts

Forward Current – 2.0 Amperes

Features

- Super fast switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
250°C/10 seconds, 0.375"(9.5mm) lead length,
5 lbs (2.3kg) tension

DO-15



Dimensions in mm

Mechanical Data

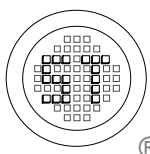
- **Case:** Molded plastic, JEDEC DO-15
- **Lead:** Plated axial leads, solderable per MIL-STD-750, method 2026 guaranteed
- **Polarity:** color band denotes cathode end
- **Mounting position:** Any
- **Weight:** 0.014 ounce, 0.4 gram

Maximum Ratings and Electrical Characteristics

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

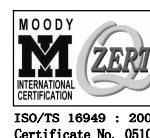
	Symbols	UG2A	UG2B	UG2C	UG2D	Units
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	150	200	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	V
Maximum average forward rectified current .375"(9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{(AV)}$	2.0				A
Peak forward surge current , 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	80.0				A
Maximum instantaneous forward voltage @ 2.0A	V_F	0.95				V
Maximum DC reverse current @ $T_A = 25^\circ\text{C}$	I_R	5.0				μA
at rated DC blocking voltage @ $T_A = 100^\circ\text{C}$	I_R	50.0				μA
Maximum reverse recovery time (Note 1)	T_{rr}	35				nS
Typical junction capacitance (Note 2)	C_J	15.0				pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	15.0				$^\circ\text{C}/\text{W}$
Operating temperature range	T_J	-65 to +150				$^\circ\text{C}$
Storage temperature range	T_S	-65 to +150				$^\circ\text{C}$

- Note: 1. Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$.
 2. Measured at 1 MHz and applied reverse voltage of 4.0 Volts D.C.
 3. Thermal Resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted.



SEMTECH ELECTRONICS LTD.

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Dated : 22/07/2004

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FIG.1-FORWARD CURRENT DERATING CURVE

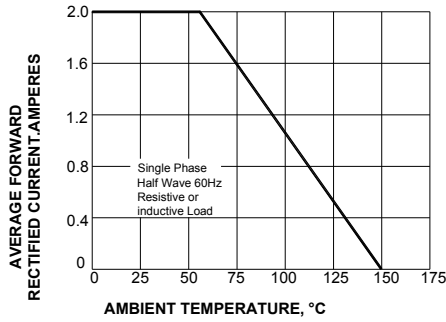


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

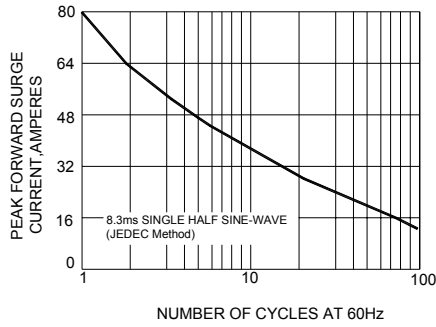


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

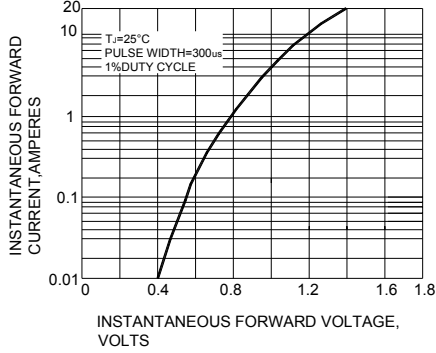


FIG.4-TYPICAL REVERSE CHARACTERISTICS

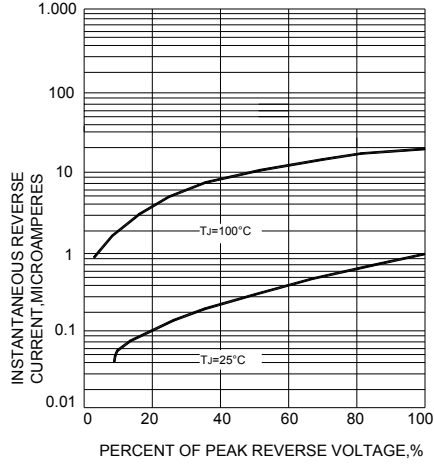


FIG.5-TYPICAL JUNCTION CAPACITANCE

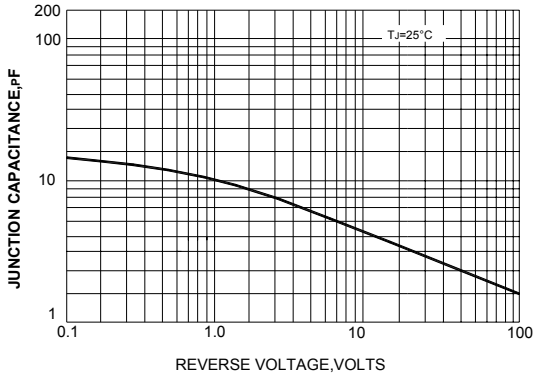
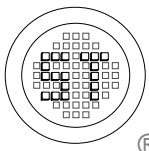
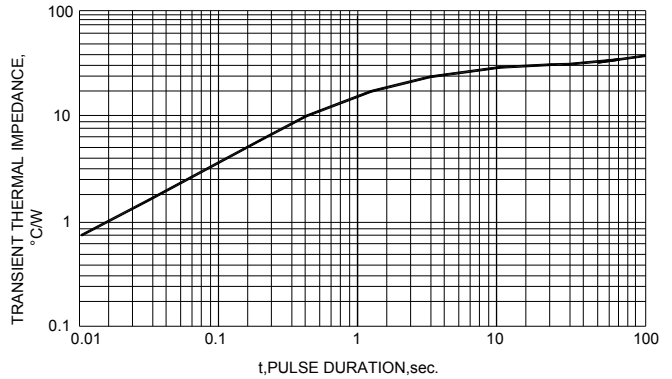
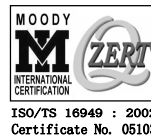


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001
Certificate No. 7116



ISO 9001 : 2000
Certificate No. 550-1559-04-002-04