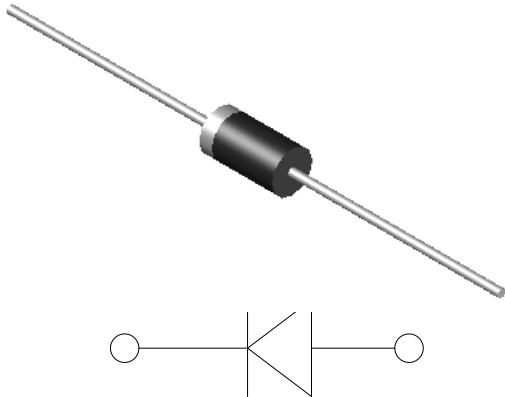




High Efficient Rectifier



Features

- High efficiency
- High current capability
- High Reliability
- High surge current capability
- Glass passivated chip junction
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Mechanical Data

- **Package:** DO-201AD(DO-27)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes cathode end

■Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	HER301 G	HER302 G	HER303 G	HER304 G	HER305 G	HER306 G	HER307 G	HER308 G
Device marking code			HER301 G	HER302 G	HER303 G	HER304 G	HER305 G	HER306 G	HER307 G	HER308 G
Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	200	300	400	600	800	1000
Average Forward Current @60Hz sine wave, Resistance load, Ta=60°C	$I_{F(AV)}$	A	3.0							
Forward Surge Current(Non-repetitive) @60Hz Half-sine wave, 1 cycle, Ta=25°C	I_{FSM}	A	125							
Storage Temperature	Tstg	°C	-55 ~+150							
Junction Temperature	Tj	°C	-55~+150							

■Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	HER301 G	HER302 G	HER303 G	HER304 G	HER305 G	HER306 G	HER307 G	HER308 G
Maximum instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =3.0A	1.0			1.3		1.7		
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	μA	T _a =25℃	2.5							
	I _{RRM2}		T _a =100℃	150							
Reverse Recovery time	t _{rr}	ns	I _F =0.5A I _R =1A I _{RR} =0.25A	50					75		
Typical junction capacitance	C _j	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.	70					40		

■Thermal Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	HER301G	HER302G	HER303G	HER304G	HER305G	HER306G	HER307G	HER308G
Thermal Resistance(Typical)	$R_{\theta J-A}$	°C/W	30							



HER301G THRU HER308G

■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
HER301G~HER308G	D1	Approximate 1.05	1250	1250	12500	Tape
HER301G~HER308G	C1	Approximate 1.05	250	250	12500	Bulk

■ Characteristics (Typical)

FIG.1: Io-Ta Curve

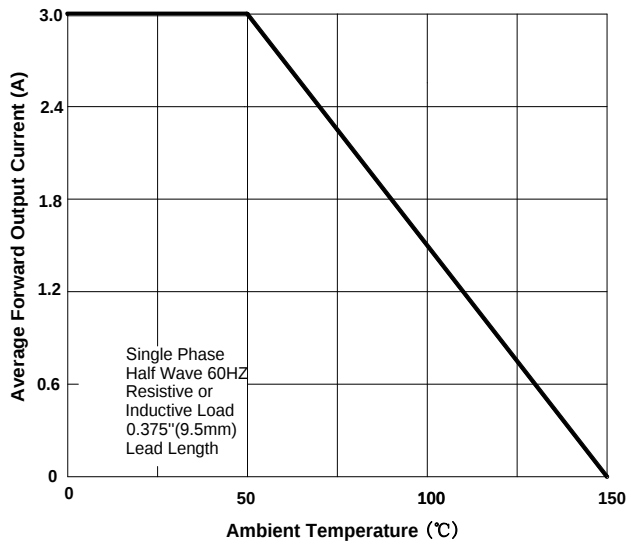


FIG.2: Forward Surge Current Capability

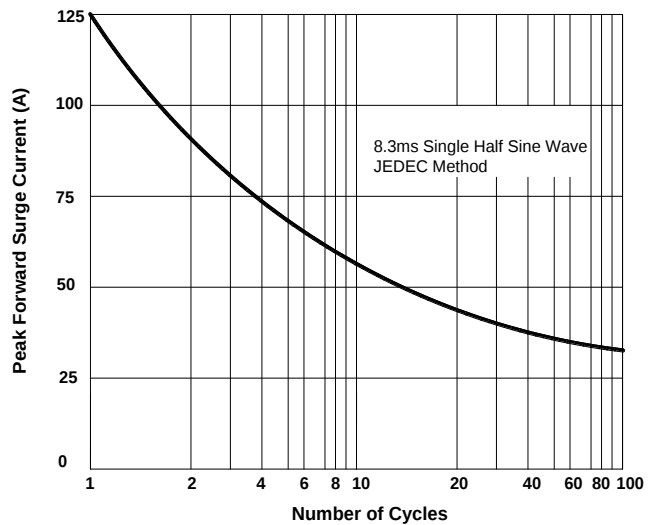


FIG.3: Forward Voltage

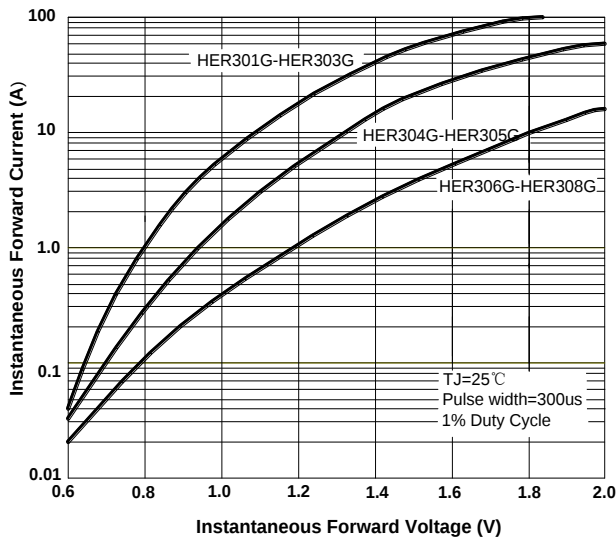
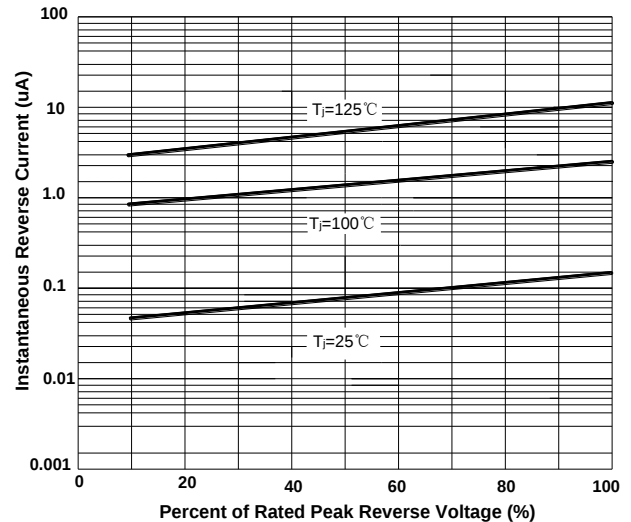


FIG.4: Typical Rverse Characteristics





The circuit diagram shows a pulse generator (NOTE2) connected in series with a 10Ω resistor and a 50Ω noninductive resistor. The pulse generator's output is connected to the anode of the DUT (Diode Under Test). The cathode of the DUT is connected to a 1Ω noninductive resistor, which is then connected to the oscilloscope (NOTE1). The oscilloscope is set to measure voltage across the 1Ω resistor. The pulse generator is configured with a rise time of 7ns max and an input impedance of 1MΩ. The source impedance is 50Ω.

NOTES:

1. Rise Time = 7ns max. Input Impedance = 1MΩ 22pf
2. Rise Time = 10ns max. Source Impedance = 50Ω

The oscilloscope trace shows the current through the diode during turn-off. The vertical axis represents current in Amperes (A), ranging from -1.0A to +0.5A. The horizontal axis represents time, with a scale of 5/10ns/cm. The trace shows a sharp transition from a positive current (approximately +0.5A) to a negative current (approximately -1.0A), with a rise time labeled as t_{rr} .

Diagram illustrating the dimensions of the DO-201AD (DO-27) component in millimeters. The diagram shows a cross-section of the component with dimensions labeled A, B, C, and D.

- A:** Width of the central rectangular section.
- B:** Height of the central rectangular section.
- C:** Length of the outer cylindrical section.
- D:** Height of the outer cylindrical section.

Dimensions in millimeters

DO-201AD(DO-27)		
Dim	Min	Max
A	8.50	9.50
B	5.00	5.60
C	25.4	/
D	1.20	1.30



HER301G THRU HER308G

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