3A, 50V - 800V High Efficient Rectifiers

FEATURES

- High efficiency, Low VF
- High current capability
- High reliability
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

DO-201AD

Pb-Free

RoHS COMPLIANT

MECHANICAL DATA

Case: DO-204AC (DO-15)

Molding compound, UL flammability classification rating 94V-0

Packing code with suffix "G" means green compound (halogen-free)

Terminal: Pure tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

Weight: 1.2g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERSTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	HER 301	HER 302	HER 303	HER 304	HER 305	HER 306	HER 307	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	V
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	420	560	V
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	600	800	V
Maximum average forward rectified current	$I_{F(AV)}$	3							A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	150							A
Maximum instantaneous forward voltage (Note 1) @ 3 A	V_F	1.0				1.3	1.7		V
Maximum reverse current @ rated V_R T_J=25°C T_J=125°C	I_R	5 150							μA
Maximum reverse recovery time (Note 2)	t_{rr}	50					75		ns
Typical junction capacitance (Note 3)	C_J	70					50		pF
Typical thermal resistance	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$	7 10 40							°C/W
Operating junction temperature range	T_J	- 55 to +150							°C
Storage temperature range	T_{STG}	- 55 to +150							°C

Note 1: Pulse test with PW=300 μs, 1% duty cycle

Note 2: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V DC

ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
HER30x (Note 1)	A0	G	DO-201AD	500 / Ammo box
	R0		DO-201AD	1,250 / 13" Paper reel
	B0		DO-201AD	500 / Bulk packing

Note 1: "x" defines voltage from 50V (HER301) to 1000V (HER307)

*: Optional available

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
HER307 A0G	HER307	A0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

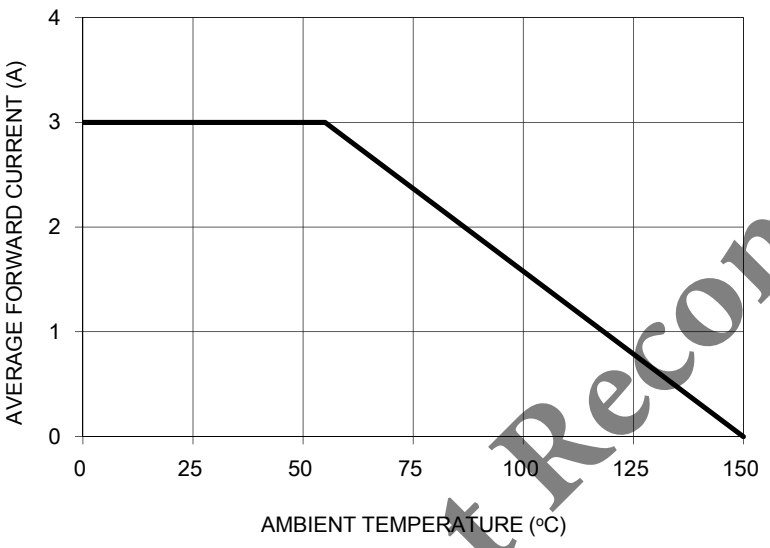


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

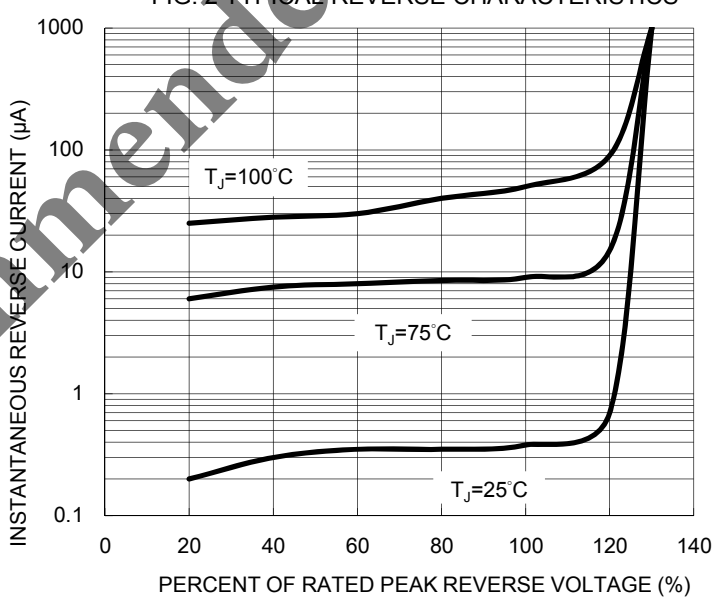


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

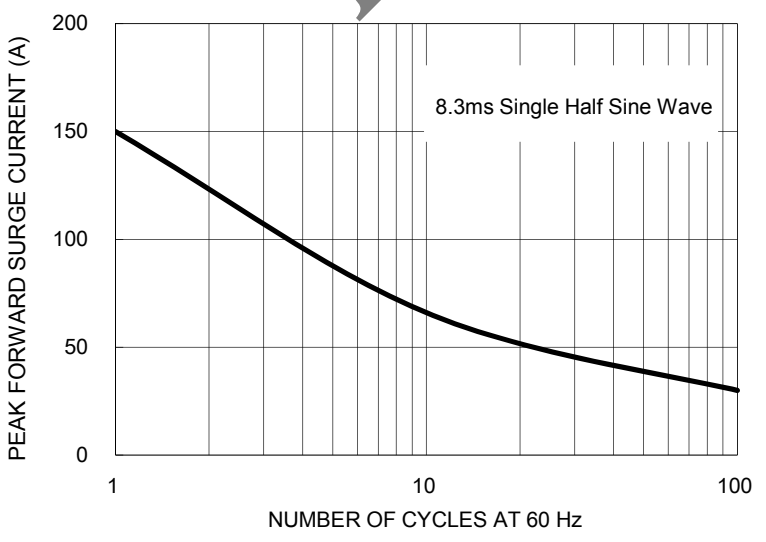


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

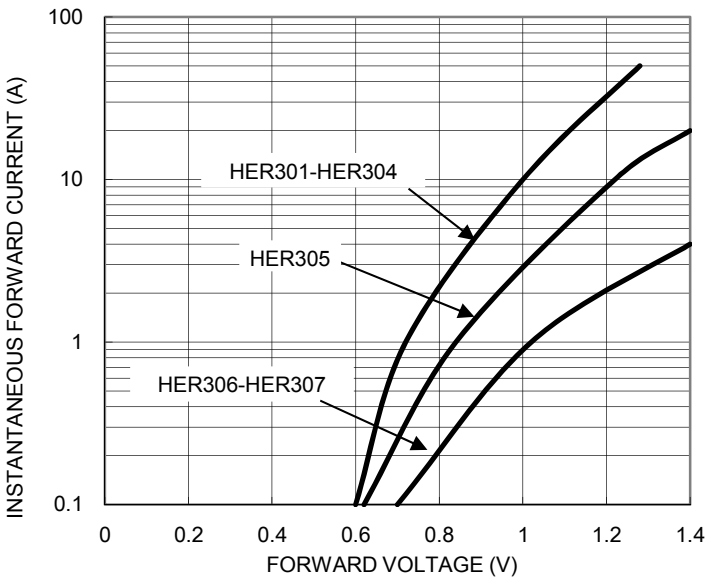


FIG. 5 TYPICAL JUNCTION CAPACITANCE

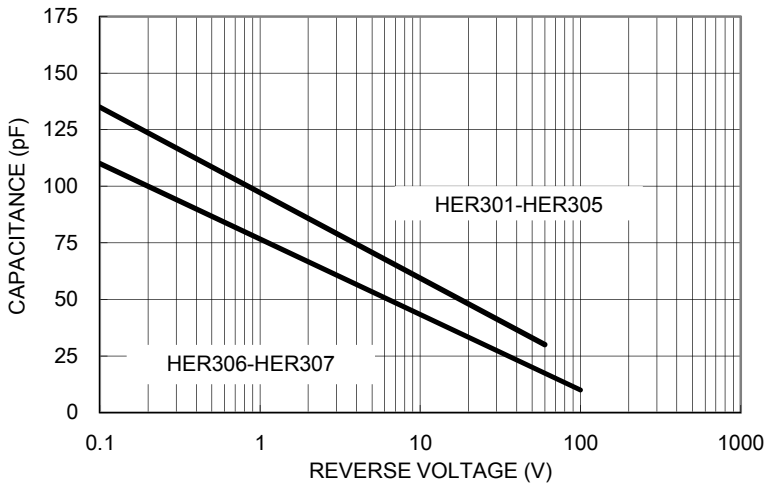
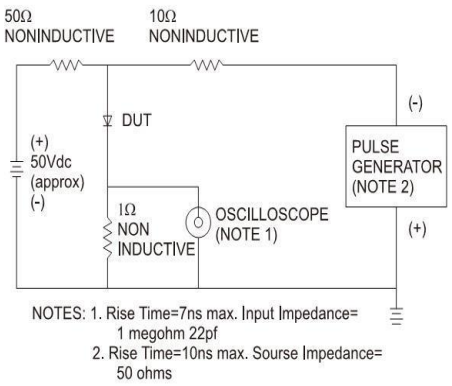
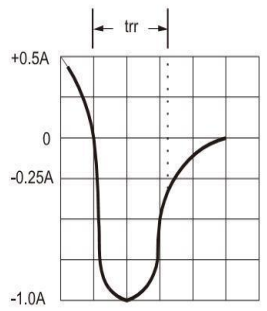


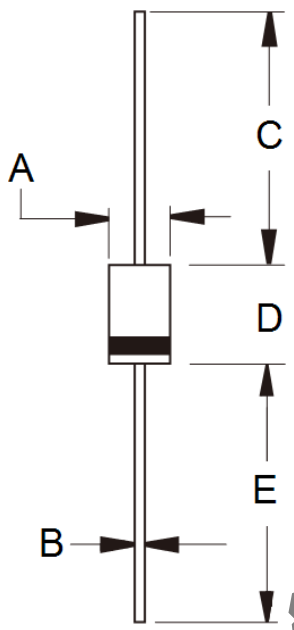
FIG.6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





PACKAGE OUTLINE DIMENSIONS

DO-201AD



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	5.00	5.60	0.197	0.220
B	1.20	1.30	0.048	0.052
C	25.40	-	1.000	-
D	8.50	9.50	0.335	0.375
E	25.40	-	1.000	-

MARKING DIAGRAM

P/N =	Specific Device Code
G =	Green Compound
YWW =	Date Code
F =	Factory Code

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