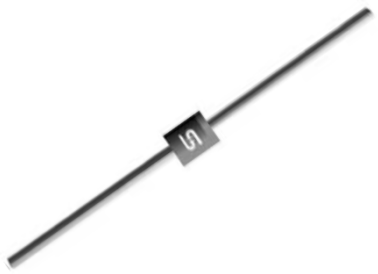
High Efficient Rectifiers

FEATURES

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



DO-204AL (DO-41)

Pb-Free

RoHS COMPLIANT

MECHANICAL DATA

Case: DO-204AL (DO-41)

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - green compound (halogen-free)

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

Meet JESD 201 class 1A whisker test

Weight: 0.3 g (approximately)

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

PARAMETER	SYMBOL	HER 101	HER 102	HER 103	HER 104	HER 105	HER 106	HER 107	HER 108	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	600	800	1000	V
Maximum average forward rectified current	$I_{F(AV)}$	1.0								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30								A
Maximum instantaneous forward voltage (Note 1) @ 1 A	V_F	1.0			1.3		1.7			V
Maximum reverse current @ rated VR T_J=25 ℃ T_J=125 ℃	I_R	5 150								μA
Maximum reverse recovery time (Note 2)	Trr	50					75			ns
Typical junction capacitance (Note 3)	Cj	25					20			pF
Typical thermal resistance	$R_{\theta jC}$ $R_{\theta jL}$ $R_{\theta jA}$	15 25 70								^{O}C/W
Operating junction temperature range	T_J	- 55 to +150								^{O}C
Storage temperature range	T_{STG}	- 55 to +150								^{O}C

Note1: Pulse Test with PW=300μs, 1% Duty Cycle

Note2: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

Note3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

ORDERING INFORMATION				
PART NO.	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
HER10x (Note 1)	A0	Suffix "G"	DO-41	3,000 / Ammo box (52mm taping)
	R0		DO-41	5,000 / 13" Paper reel
	R1		DO-41	5,000 / 13" Paper reel (Reverse)
	B0		DO-41	1,000 / Bulk packing

Note 1: "x" defines voltage from 50V (HER101) to 1000V (HER108)

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
HER107 A0	HER107	A0		
HER107 A0G	HER107	A0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(TA=25℃ unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

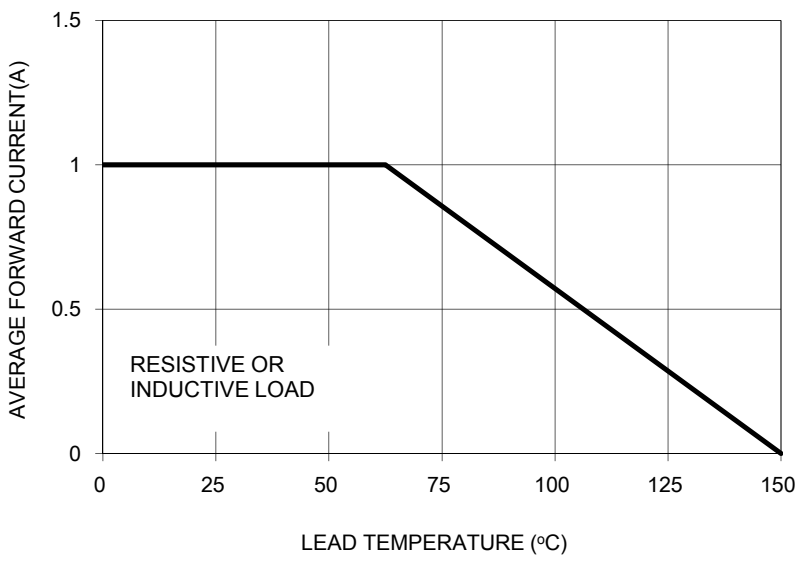


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

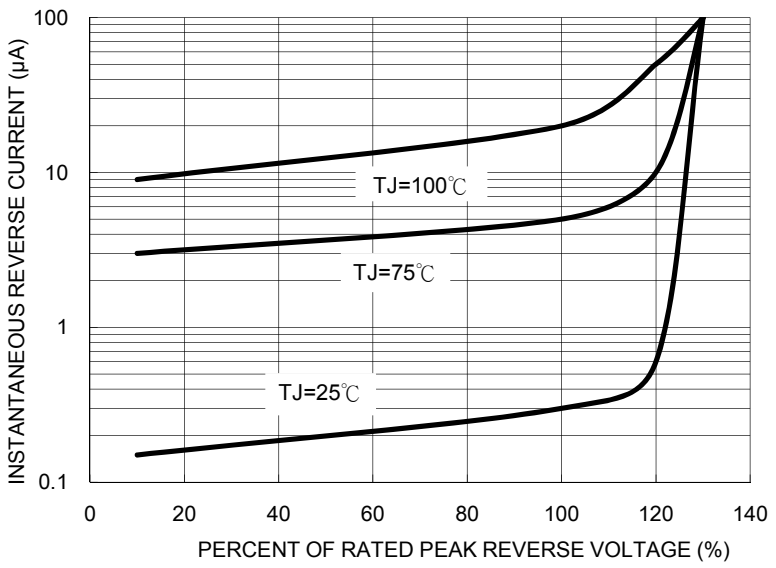


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

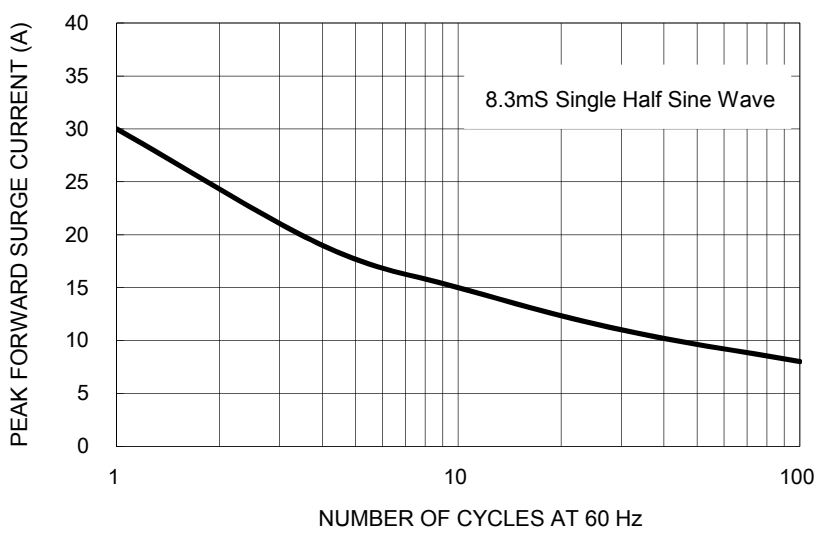


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

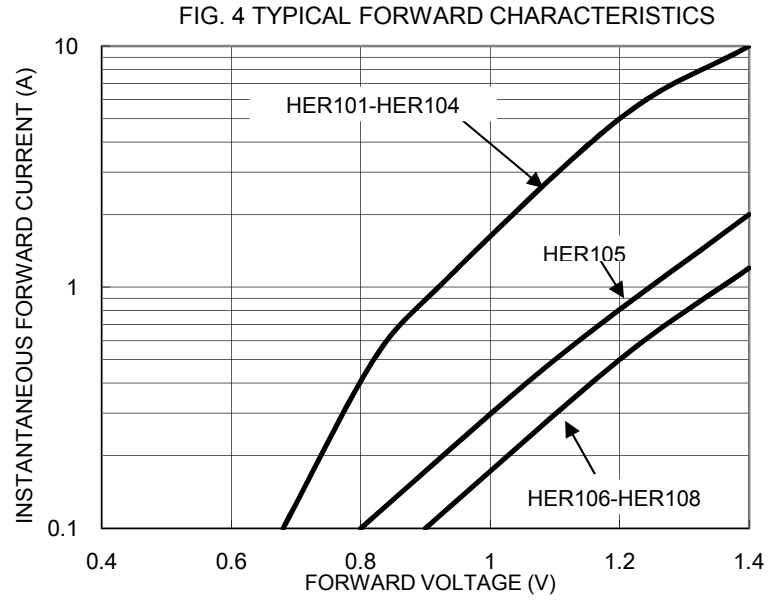


FIG. 5 TYPICAL JUNCTION CAPACITANCE

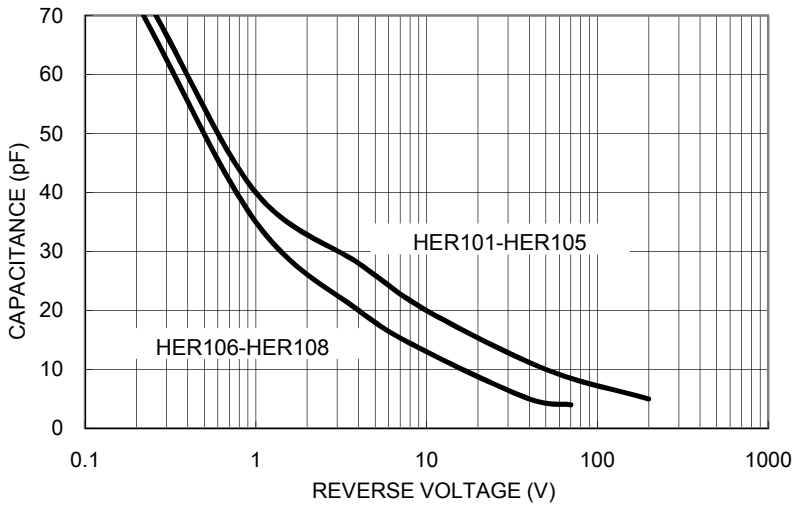
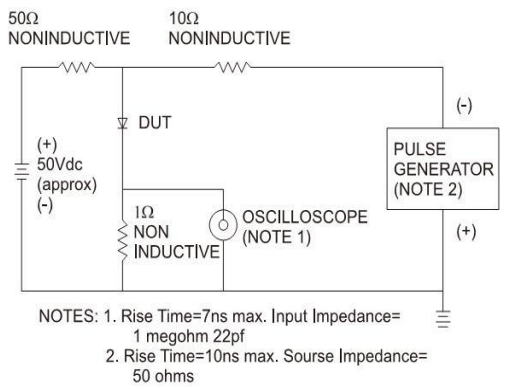
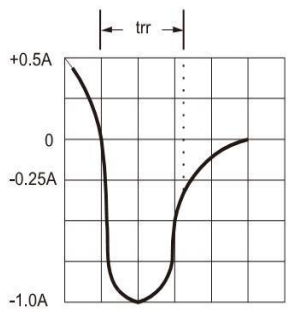
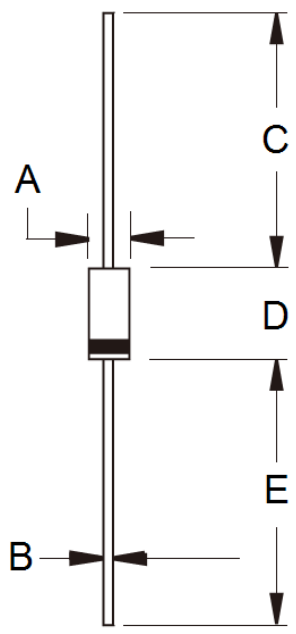


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.00	2.70	0.079	0.106
B	0.71	0.86	0.028	0.034
C	25.40	-	1.000	-
D	4.20	5.20	0.165	0.205
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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