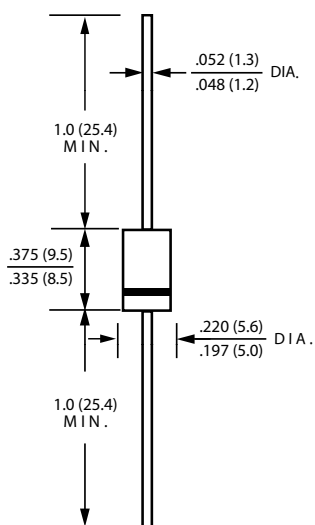


## High Efficiency Rectifiers Plastic Passivation Junction



DO-201AD

Dimensions in inches and (millimeters)

Ordering Information	
Part Number	Remark
HER50x	General
HER50x-H	Halogen Free
HER50x-Q	Automotive

PRIMARY CHARACTERISTICS	
$I_F$	5A
$V_{RRM}$	50~1000V
$I_{FSM}$	100A
$V_F$	1.0V, 1.3V, 1.7V
$T_J$ max	125°C

### Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- High speed switching
- AEC-Q101 qualified

### Mechanical Data

- Case: DO-201AD
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead Free Plating (Tin Finish). Solderable per MIL-STD-202, Method 208
- Weight: 1.071 grams (approximate)

### MAXIMUM RATINGS (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	HER 501	HER 502	HER 503	HER 504	HER 505	HER 506	HER 507	UNIT	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V	
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V	
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V	
Maximum average forward rectified current	$I_F$	5.0							A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	100.0							A	
Maximum Instantaneous Forward Voltage IF=5A @ 25°C	$V_F$	1.00		1.30		1.70			V	
Maximum DC Reverse Current @ Tc=25°C at Rated DC Blocking Voltage @ Tc=100°C	$I_R$	5 100							uA	
Typical Junction Capacitance(NOTE1)	$C_j$	75							pF	
Maximum Reverse Recovery Time(NOTE2)	$T_{rr}$	50				75				ns
Typical Thermal Resistance	$R_{\theta Ja}$ $R_{\theta Jc}$	70 50							°C/W	
Operating Temperature Range	$T_J$	-55 to +125							°C	
Storage Temperature Range	$T_{STG}$	-55 to +150							°C	

NOTES:1.Measured at 1.0MHZ and applied reverse voltage of 4.0V DC

2.Measured with IF=0.5A, IR=1A, IRR=0.25A

## High Efficiency Rectifiers Plastic Passivation Junction

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

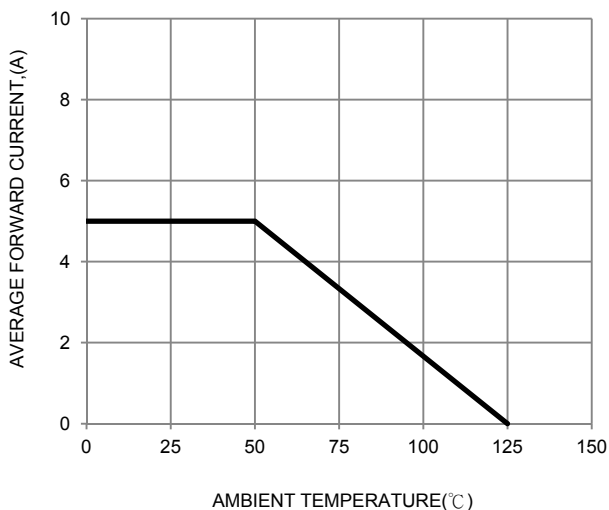


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

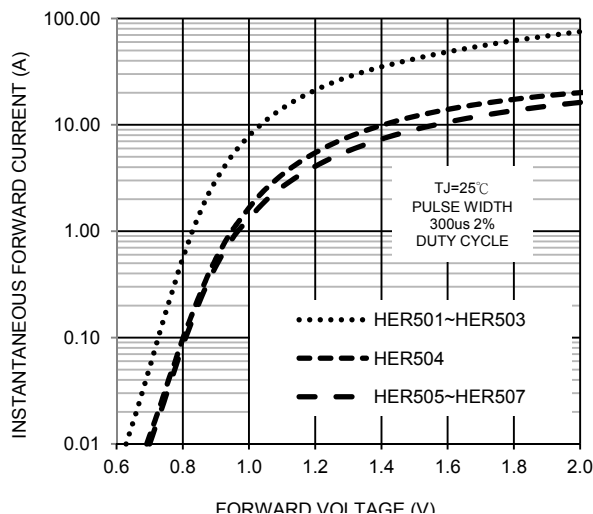


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

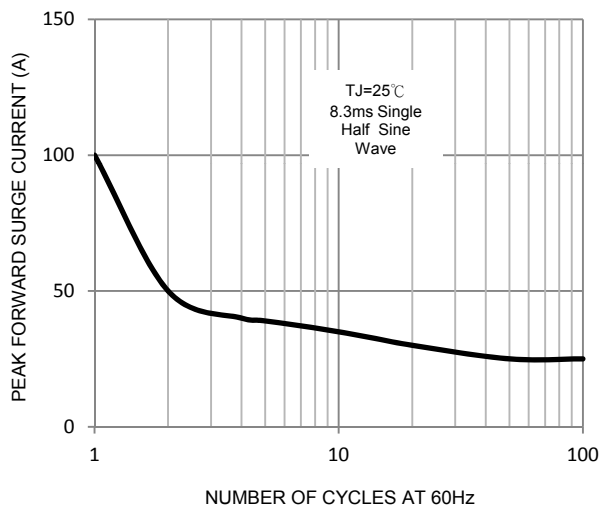


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

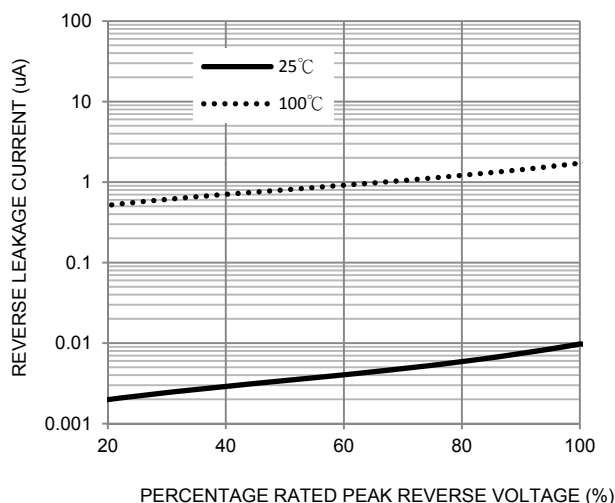


FIG. 5-TYPICAL JUNCTION CAPACITANCE

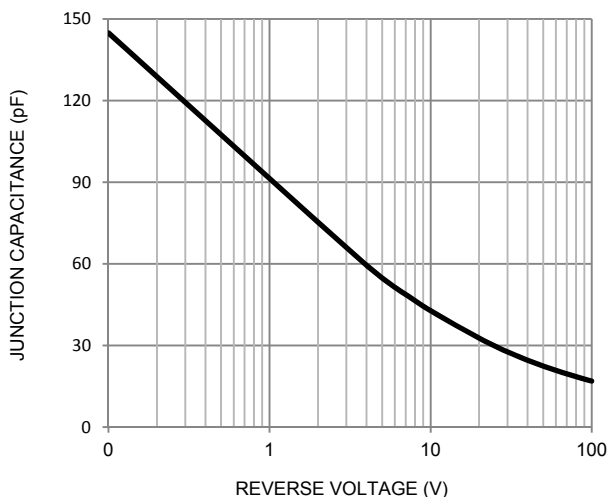


FIG. 6-Reverse Recovery Time Characteristic and Test Circuit

