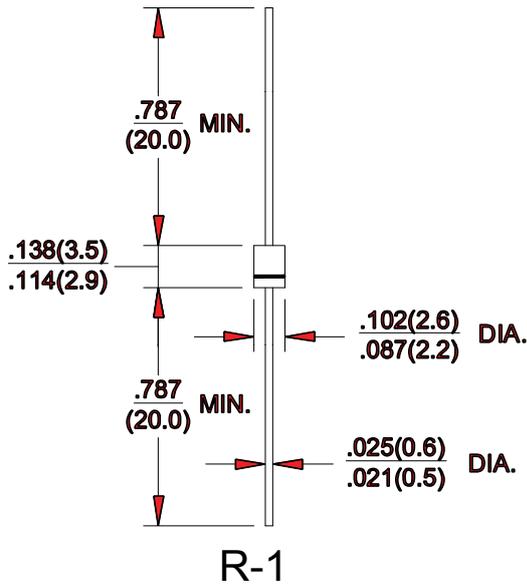




# 1H1 thru 1H7



## High Efficiency Rectifiers Plastic Passivation Junction



Dimensions in inches and (millimeters)



Ordering Information	
Part Number	Remark
1Hx	General
1Hx-H	Halogen Free
1Hx-Q	Automotive

PRIMARY CHARACTERISTICS	
$I_F$	1A
$V_{RRM}$	50~1000V
$I_{FSM}$	25A
$V_F$	1.0V, 1.3V, 1.7V
$T_J \text{ max}$	125°C

### Features

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

### Mechanical Date

- Case: R-1
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead Free Plating (Tin Finish). Solderable per MIL-STD-202, Method 208
- Weight: 0.201 grams (approximate)

MAXIMUM RATINGS (TA=25°C unless otherwise noted)										
PARAMETER	SYMBOL	1H1	1H2	1H3	1H4	1H5	1H6	1H7	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	$I_F$	1.0							A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	25.0							A	
Maximum Instantaneous Forward Voltage $I_F=1A @ 25^\circ C$	$V_F$	1.00		1.30		1.70			V	
Maximum DC Reverse Current @ $T_c=25^\circ C$ at Rated DC Blocking Voltage @ $T_c=100^\circ C$	$I_R$	5 100							uA	
Typical Junction Capacitance(NOTE1)	$C_j$	75							pF	
Maximum Reverse Recovery Time(NOTE2)	$T_{rr}$	50				75				ns
Typical Thermal Resistance	$R_{\theta Ja}$ $R_{\theta Jc}$	100 70							°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  $I_F=0.5A$ ,  $I_R=1A$ ,  $IRR=0.25A$



## High Efficiency Rectifiers Plastic Passivation Junction

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

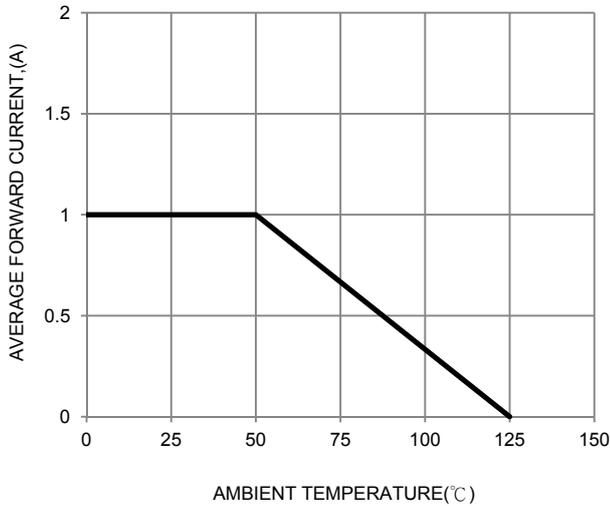


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

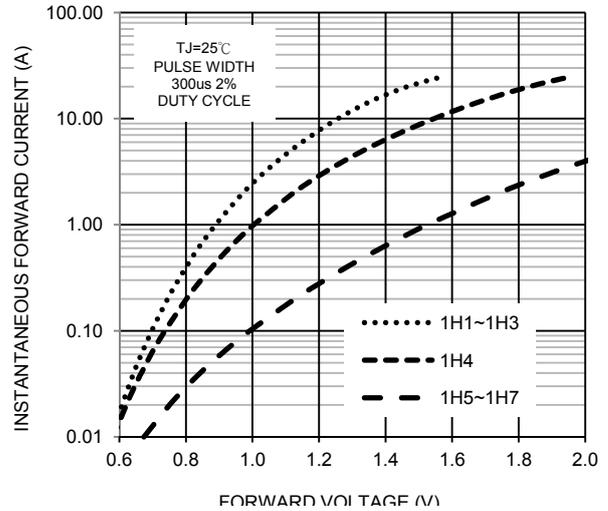


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

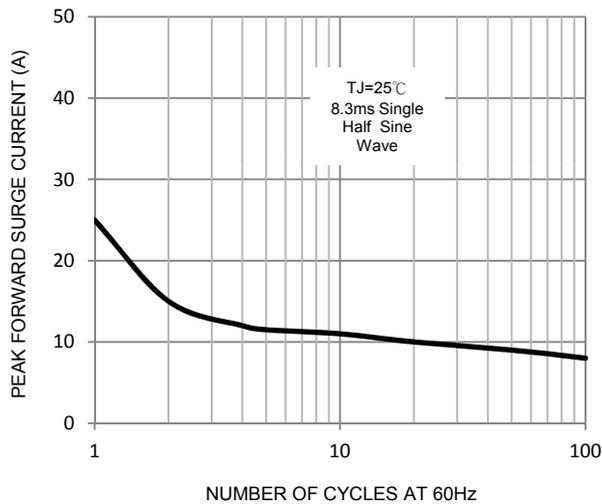


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

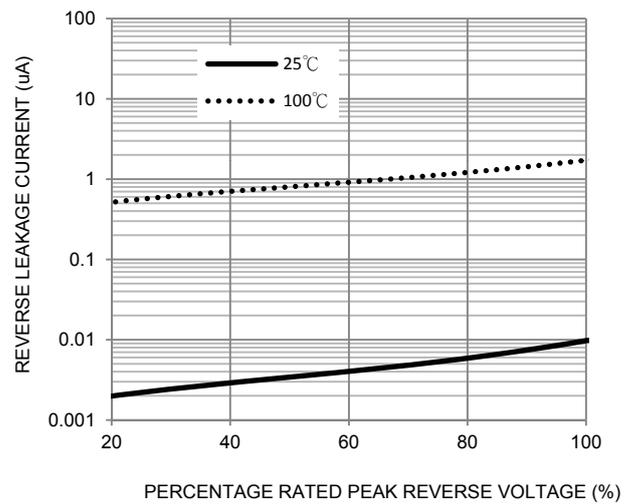


FIG. 5-TYPICAL JUNCTION CAPACITANCE

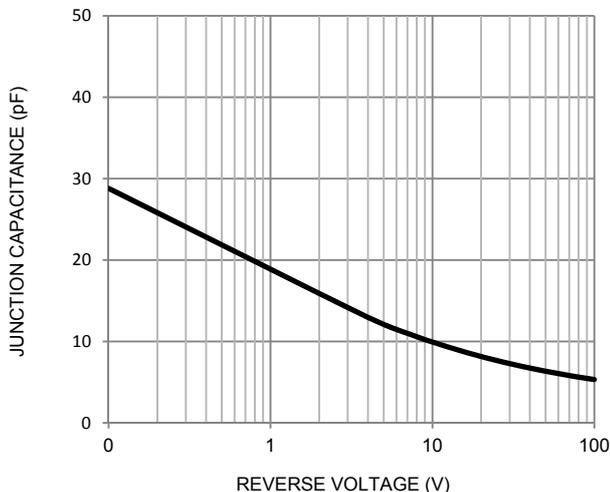


FIG. 6-Reverse Recovery Time Characteristic and Test Circuit

