

SURFACE MOUNT GLASS HIGH EFFICIENCY RECTIFIERS

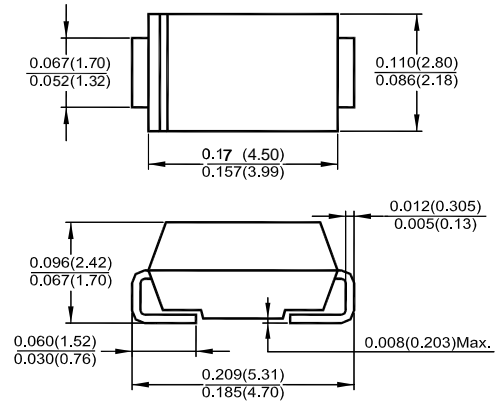
FEATURES

- Low cost
- Diffused junction
- Ultra fast switching for high efficiency
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0

MECHANICAL DATA

Case Molded Plastic
 Polarity: Indicated by cathode band
 Weight: 0.002 ounces,0.064 grams
 Mounting position: Any

HS1A---HS1M



Dimensions in inches and (millimeters)
 DO-214AC (SMA)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.
 Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%

Type Number	Symbol	HS 1A	HS 1B	HS 1D	HS 1F	HS 1G	HS 1J	HS 1K	HS 1M	Units	
Maximum Recurrent 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 See Fig.1	I _{F(AV)}	1.0								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	30								A	
Maximum Instantaneous Forward Voltage @ 1.0A	V _F	1.0			1.3		1.7			V	
Maximum D.C. Reverse Current at Rated DC Blocking Voltage (Note1)	I _R					5.0					uA
@ T _A =25 °C						50					uA
@ T _A =100 °C						150					uA
@ T _A =125 °C											
Maximum Reverse Recovery Time (Note4)	T _{rr}	50				75				nS	
Typical Junction Capacitance (Note 2)	C _j	20				15				pF	
Maximum Thermal Resistance (Note 3)	R _{θJA}	70								°C/W	
Operating Temperature Range	T _J	-55 to +150								°C	
Storage Temperature Range	T _{STG}	-55 to +150								°C	

- Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle
 2. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
 3. Measured at 1 MHz and Applied V_R=4.0 Volts.
 4. Mounted on P.C.Board with 0.2" x 0.2" (5mm x 5mm) Copper Pad Area.

HS1A---HS1M Typical Characteristics

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

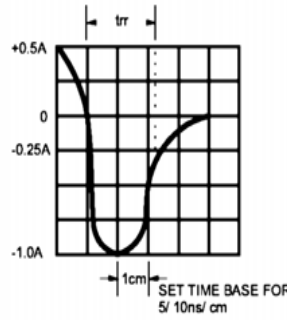
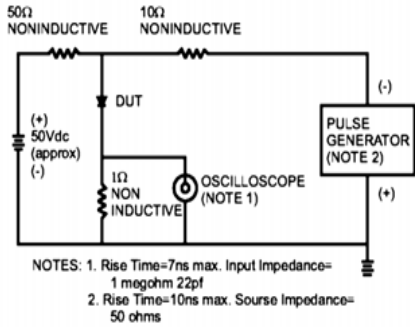


FIG.2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

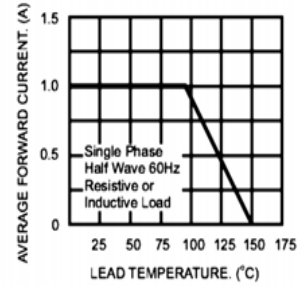


FIG.3- TYPICAL REVERSE CHARACTERISTICS

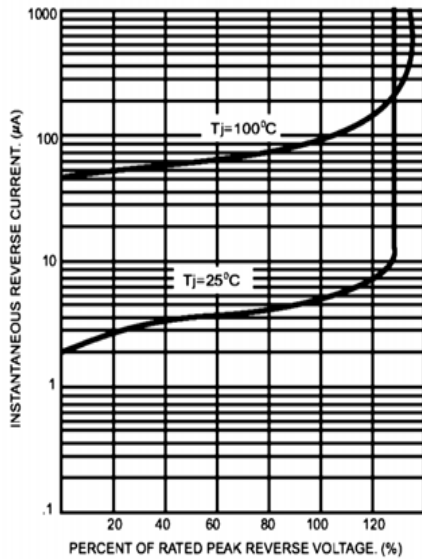


FIG.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

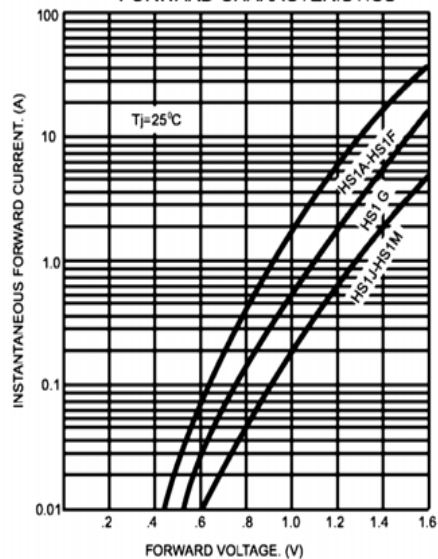


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

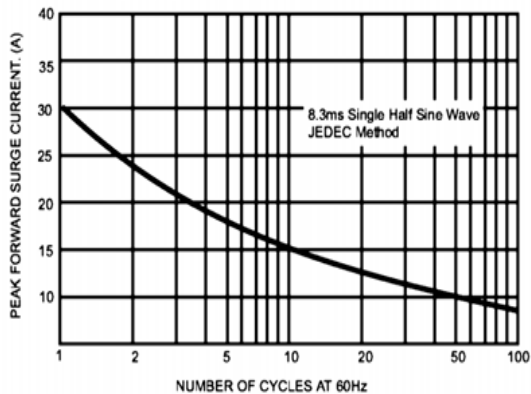


FIG.6- TYPICAL JUNCTION CAPACITANCE

