

# STTH1R06U

**PRV : 600 Volts**  
**Io : 1.0 Ampere**

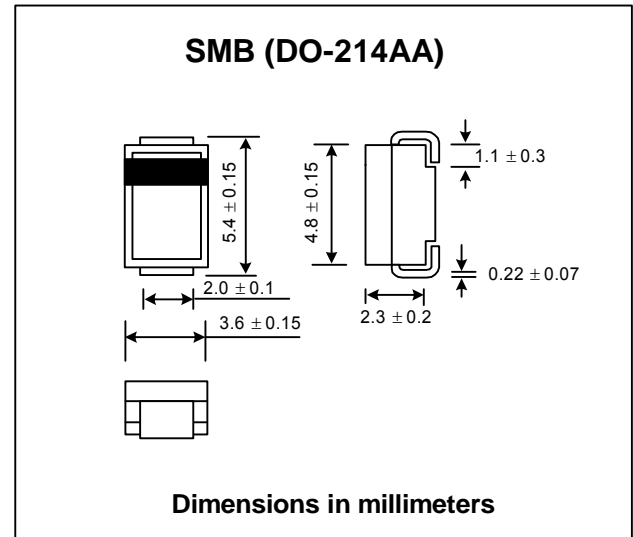
### FEATURES :

- \* Glass passivated junction chip
- \* Hyperfast switching
- \* Low reverse recovery current
- \* Low thermal resistance
- \* Reduces switching & conduction losses
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : SMB Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Lead Formed for Surface Mount
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.108 gram

## SURFACE MOUNT HYPERFAST RECOVERY RECTIFIER



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

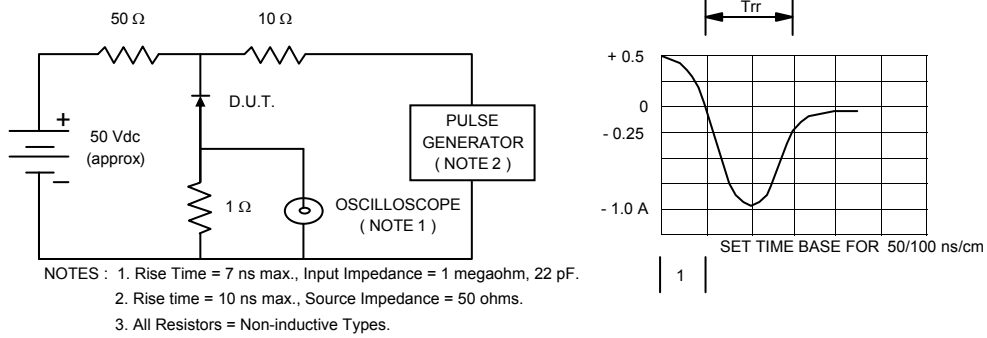
RATING	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	600	V
RMS forward voltage	$I_{F(RMS)}$	7.0	A
Maximum average forward current, $T_c = 135\text{ °C}$ $\delta = 0.5$	$I_{F(AV)}$	1.0	A
Non-repetitive forward surge current, $t_p=10\text{ms}$ sinusoidal	$I_{FSM}$	20	A
Maximum forward voltage drop at $I_F = 1\text{ A}$ , $T_J = 25\text{ °C}$ $T_J = 150\text{ °C}$	$V_F$	1.7 1.25	V
Maximum DC reverse current $T_J = 25\text{ °C}$	$I_R$	1.0	$\mu\text{A}$
at rated DC blocking voltage $T_J = 150\text{ °C}$	$I_{R(H)}$	75	$\mu\text{A}$
Maximum reverse recovery time, $T_J = 25\text{ °C}$ ( Note 1 )	$T_{rr}$	25	ns
Thermal resistance (Junction to lead), $L = 10\text{mm}$	$R_{\theta JL}$	25	$^{\circ}\text{C/W}$
Maximum operating junction temperature range	$T_J$	175	$^{\circ}\text{C}$
Storage temperature range	$T_{STG}$	- 65 to + 175	$^{\circ}\text{C}$

#### Notes :

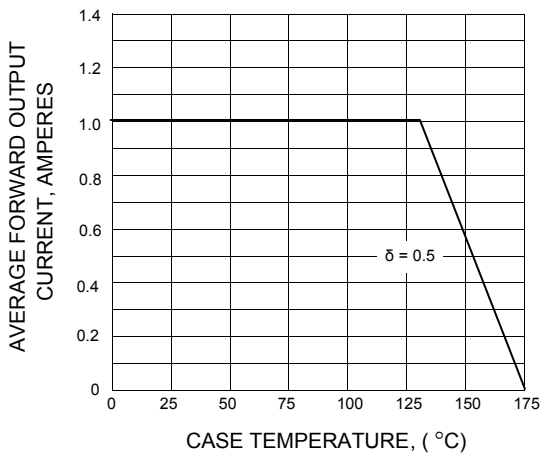
( 1 ) Reverse Recovery Test Conditions  $I_F = 0.5\text{ A}$ ,  $I_R = 1.0\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .

## RATING AND CHARACTERISTIC CURVES ( STTH1R06U )

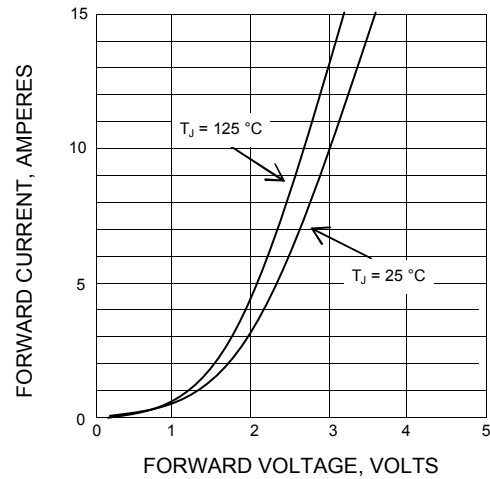
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

