

# FS2A THRU FS2M

## 1.5 AMP FAST RECOVERY SILICON RECTIFIERS



**VOLTAGE RANGE**  
50 to 1000 Volts

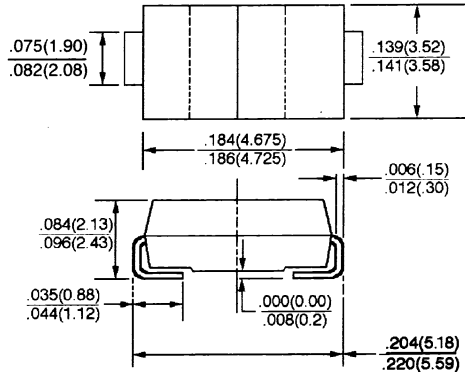
### FEATURES

- \* For surface mount applications
- \* Extremely low thermal resistance
- \* Easy pick and place
- \* High temp soldering: 250°C for 10 seconds at terminals
- \* Superfast recovery times for high efficiency

### MECHANICAL DATA

- \* CASE: Molded plastic
- \* Terminals: Solder plated
- \* Polarity: Indicated by cathode band
- \* Standard packaging: 12mm tape (EIA STD RS-481)
- \* Weight: 0.100 grams

### SMB/DO-214AA



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

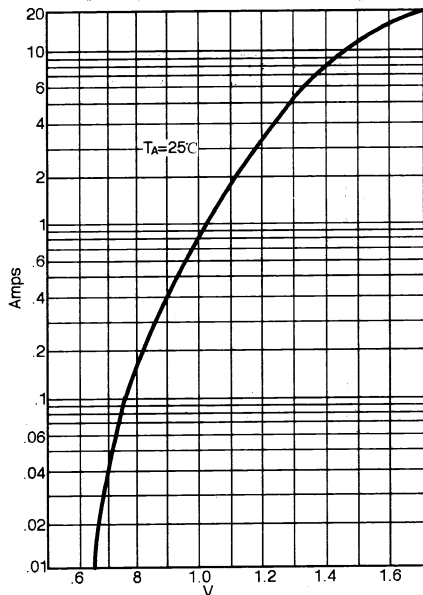
Rating at 25°C ambient temperature unless otherwise specified.  
 Maximum thermal Resistance: 15°C/W Junction to Lead.

TYPE NUMBER	SYMBOLS	FS2A	FS2B	FS2D	FS2G	FS2J	FS2K	FS2M	UNITS
Maximum Recurrent 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 $T_L = 90^\circ\text{C}$	$I_{F(AV)}$	1.5							A
Peak Forward Surge Current, (8.3 ms half sine)	$I_{FSM}$	50.0							A
Maximum Instantaneous Forward Voltage $T_J = 25^\circ\text{C}$ $I_{FM} = 1.5\text{A}$ (Note 1)	$V_F$	1.3							V
Maximum D. C Reverse Current at Rated D. C. Blocking Voltage	$I_R$	5 200							$\mu\text{A}$
Maximum Reverse Recovery time (Note 2)	$T_{rr}$	150				250	500		nS
Typical Junction Capacitance (Note 3)	$C_J$	25							pF
Operating and Storage Temperature Range	$T_J, T_{STG}$	- 50 to + 150							°C

- NOTES: 1. Pulse test: Pulse width 300 $\mu\text{sec}$ , 1% duty cycle.  
 2. Reverse Recovery Test Conditions:  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$   
 3. Measured at 1 MHz and applied reverse Voltage  $V_R = 4.0$  volts D. C.

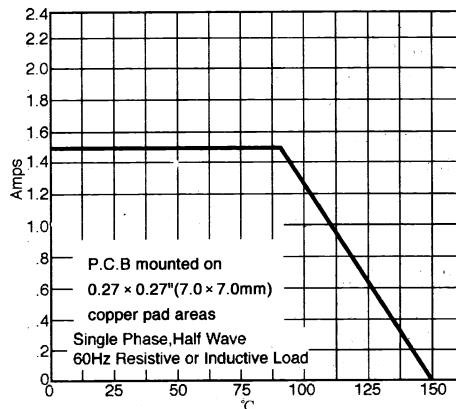
## RATINGS AND CHARACTERISTIC CURVES (FS2A THRU FS2M)

Figure 1 – Typical Forward Characteristics



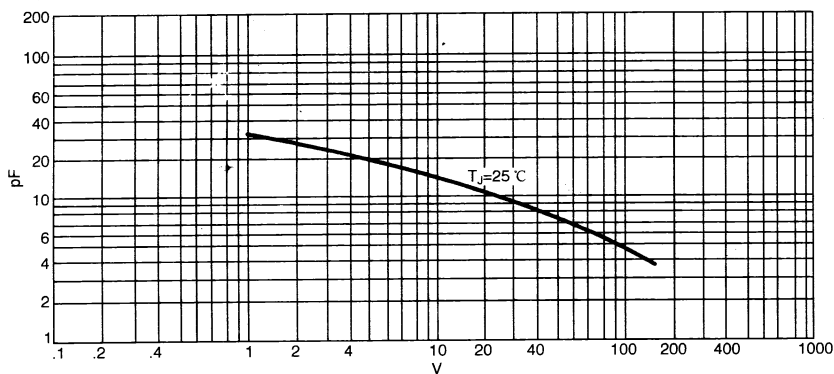
Instantaneous Forward Current-Amperes versus  
Instantaneous Forward Voltage-Volts

Figure 2 – Forward Derating Curve



Average Forward Rectified Current-Amperes versus  
Lead Temperature- $^\circ\text{C}$

Figure 3 – Junction Characteristics



Junction Capacitance-pF versus Reverse Voltage-v

## RATINGS AND CHARACTERISTIC CURVES (FS2A THRU FS2M)

Figure 4 – Peak Forward Surge Current

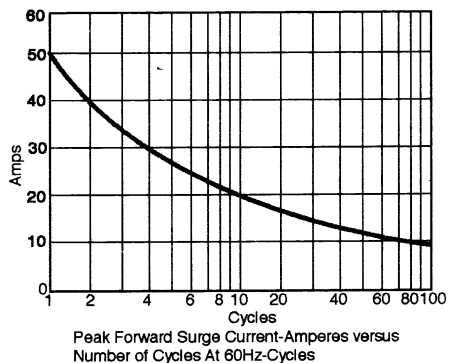
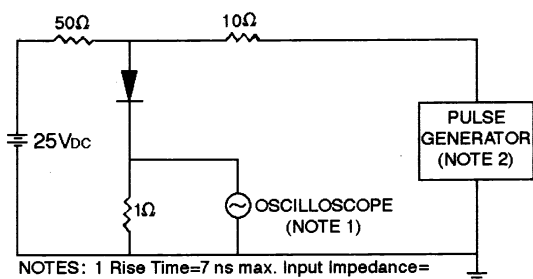
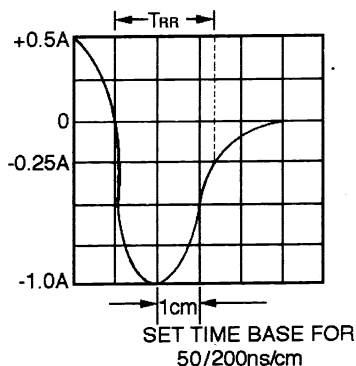


Figure 5 – Reverse Recovery Time Characteristic And Test Circuit Diagram



- NOTES: 1 Rise Time=7 ns max. Input Impedance= 1 megohm 22pF  
 2 Rise Time=10ns max. Source Impedance= 50 ohms  
 3 Resistors are non-inductive



### SUGGESTED SOLDER PAD LAYOUT

