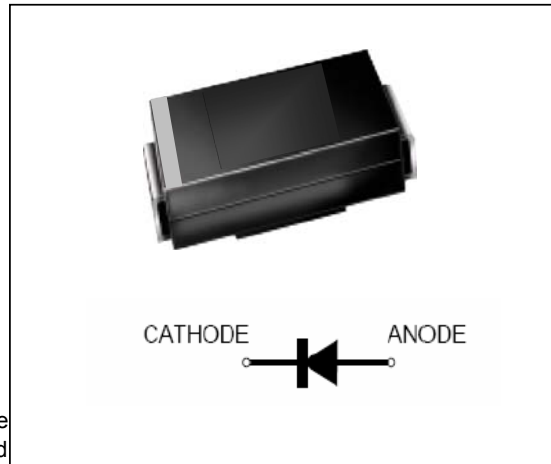


# S-FM401 thru S-FM407

## Surface Mount Glass Passivated Junction Rectifiers Reverse Voltage 50 to 1000V Forward Current 1.0A

### FEATURES

- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* High temperature metallurgically bonded construction
- \* Cavity-free glass passivated junction
- \* Capable of meeting environmental standards of MIL-S-19500
- \* 1.0 A operation at TL=100°C with no thermal runaway
- \* Typical IR less than 1.0 $\mu$ A
- \* High temperature soldering guaranteed: 260°C/10 seconds
- \* S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



### Mechanical Data

**Case:** JEDEC DO-214AC, molded plastic over glass body

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.0023 oz., 0.065 g

**Handling precaution:** None

### Electrical Characteristic

#### 1. Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	S-FM 401	S-FM 402	S-FM 403	S-FM 404	S-FM 405	S-FM 406	S-FM 407	Unit
Device marking code		M01	M02	M03	M04	M05	M06	M07	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RSM voltage	$V_{RSM}$	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 0.375" (9.5mm) lead length at TL = 75°C(See fig. 1)	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							A
Typical thermal resistance (Note 1)	$R_{\theta JA}$	150							°C/W
	$R_{\theta JL}$	35							°C/W
Operating junction and storage temperature range	$T_J, T_{STG}$	-50 to +150							°C

#### Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	S-FM 401	S-FM 402	S-FM 403	S-FM 404	S-FM 405	S-FM 406	S-FM 407	Unit
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.1							V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 125^\circ\text{C}$	IR	5.0 50							$\mu\text{A}$
Typical junction capacitance at 4.0V, 1MHz	CJ	8.0							PF

#### NOTES:

1.  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$
2. 8.0mm<sup>2</sup> (.013mm thick) land areas

We declare that the material of product compliance with ROHS requirements

# S-FM401 thru S-FM407

## 2. Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

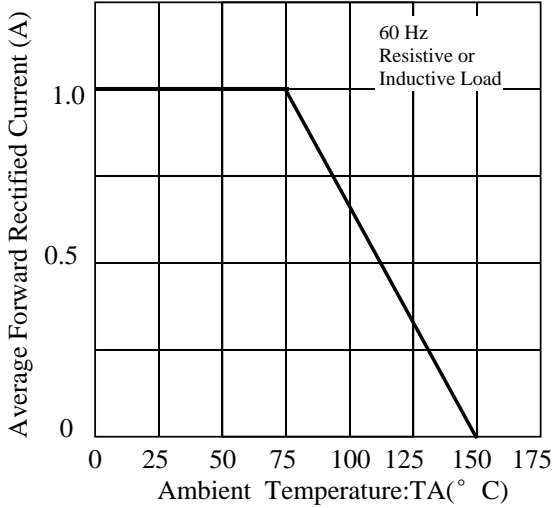


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

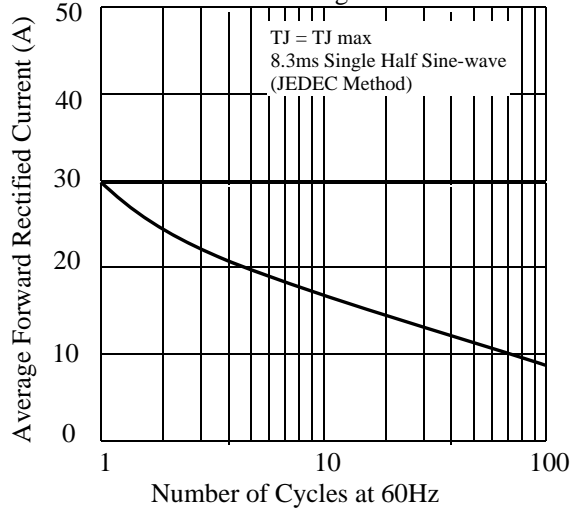


Fig 3. - Typical Instantaneous Forward Characteristics

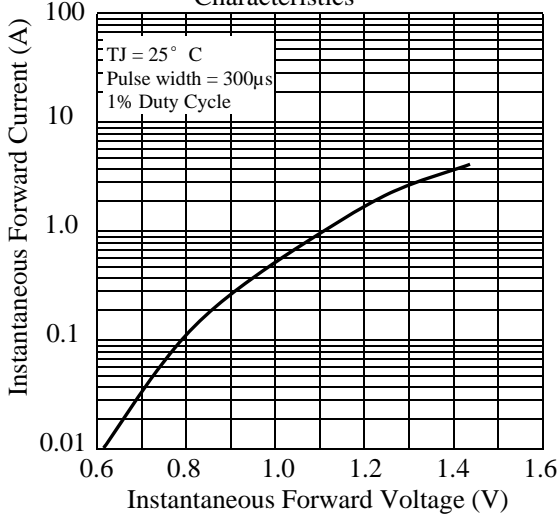


Fig 4. - Typical Reverse Characteristics

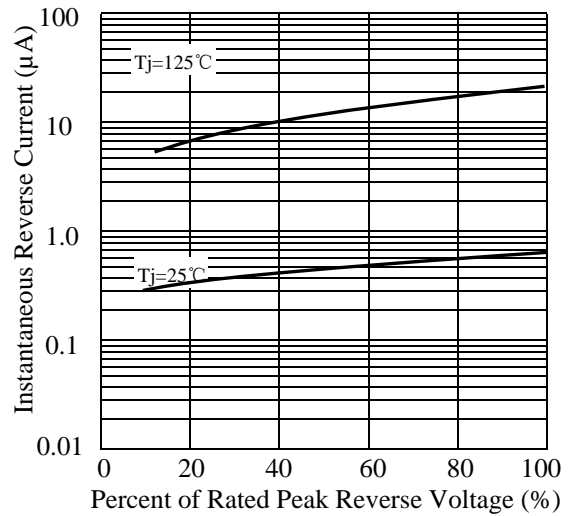


Fig 5. - typical transient thermal impedance

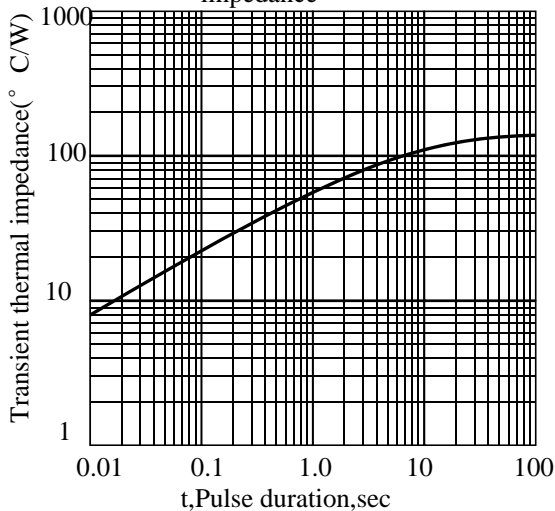
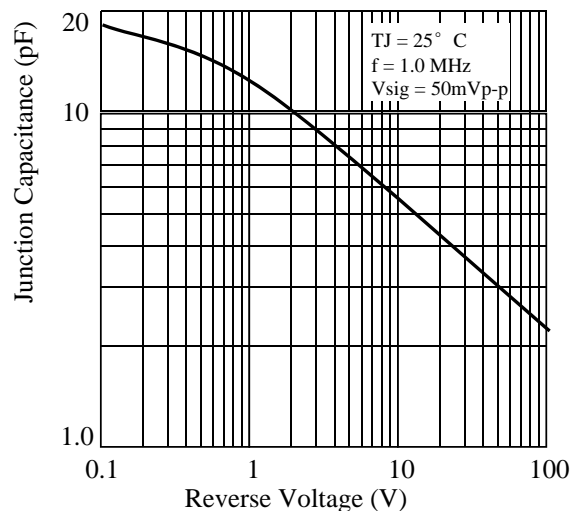


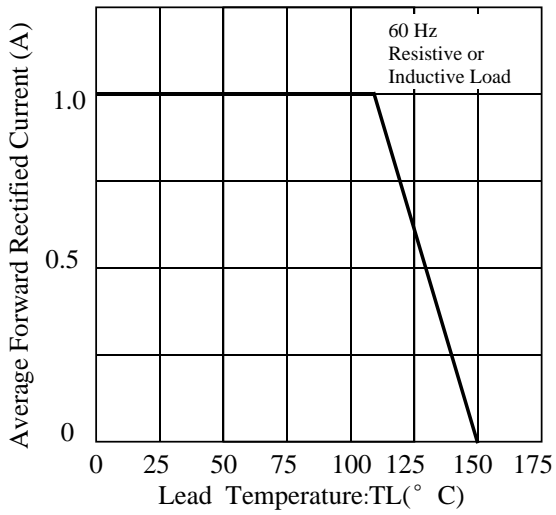
Fig 6. - Typical Junction Capacitance



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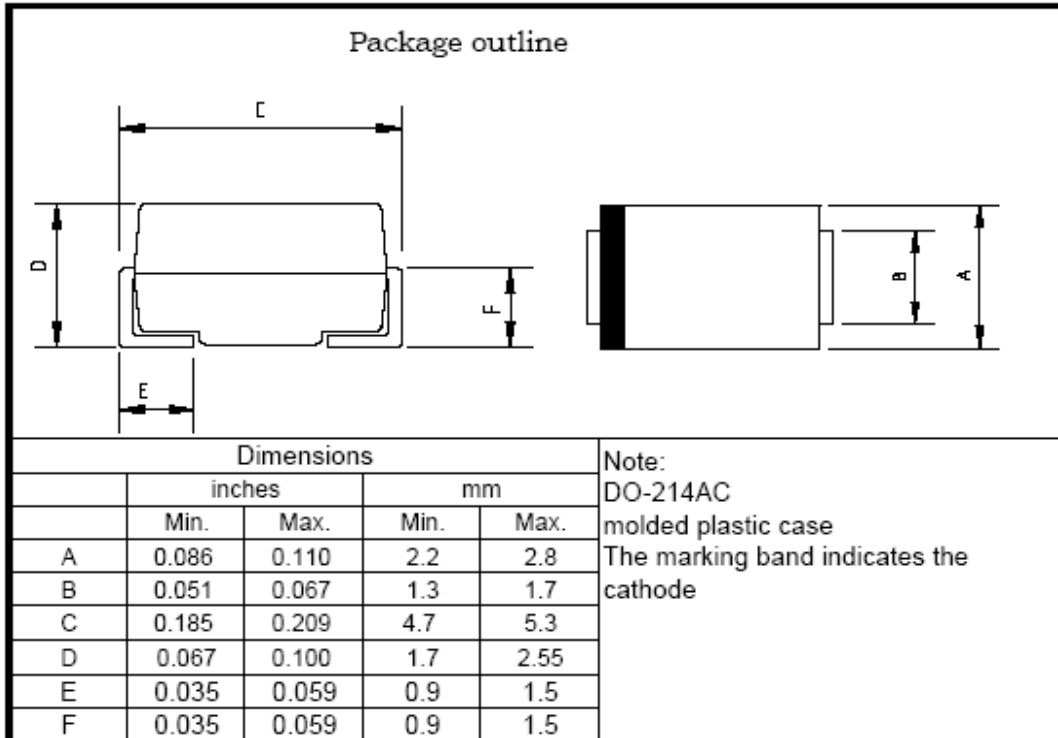
### 2.Ratings and Characteristic Curves ( TA = 25°C unless otherwise noted )

Fig. 7 - Forward Current Derating Curve



## S-FM401 thru S-FM407

### 3. dimension:



## S-FM401 thru S-FM407

### 4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2013.11.01
2	增加TL热阻及电流降额曲线。	谭志伟	2018.10.24