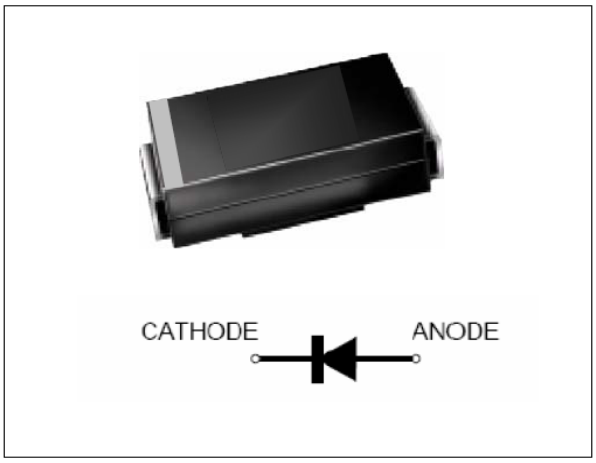
S-EFM102

Surface Mount Glass Passivated Super Fast Rectifiers

Reverse Voltage 100V Forward Current 1.0A

FEATURES

* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
* High temperature metallurgically bonded construction
* For use in high frequency rectifier circuits
* Fast switching for high efficiency
* 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 1.0μA
* 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.



We declare that the material of product compliancewith ROHS requirements

2.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 precautin:None

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
S-EFM102	EF2	7500/Tape&Reel

4.Electrical Characteristic

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

Parameter Symbol	symbol	S-EFM102	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum RMS voltage	V_{RMS}	70	V
Maximum DC blocking voltage	V_{DC}	100	V
Maximum average forward rectified current at TL = 100°C	IF(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 2)	RθJA	150	°C/W
Operating junction and storage temperature range	TJ, TSTG	–50 to +150	°C

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

Parameter Symbol	symbol	S-EFM102	Unit
Maximum instantaneous forward voltage at 1.0A	V_F	0.95	V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TJ = 125°C	IR	5.0 100	μA
Typical reverse recovery time (Note 1)	trr	35	ns
Typical junction capacitance at 4.0V, 1MHz	CJ	8.0	PF

NOTES:

1. IF = 0.5A, IR = 1.0A, IRR = 0.25A
2. 8.0mm2 (.013mm thick) land areas
3. VF & TRR & VDC & IR all test； other parameter is scheme out.

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

Fig. 1 – Forward Current Derating Curve

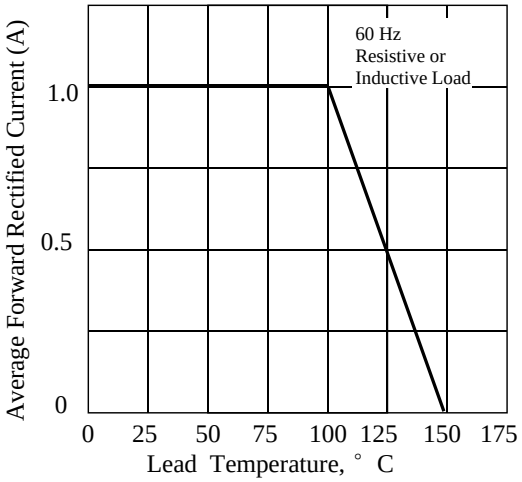


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

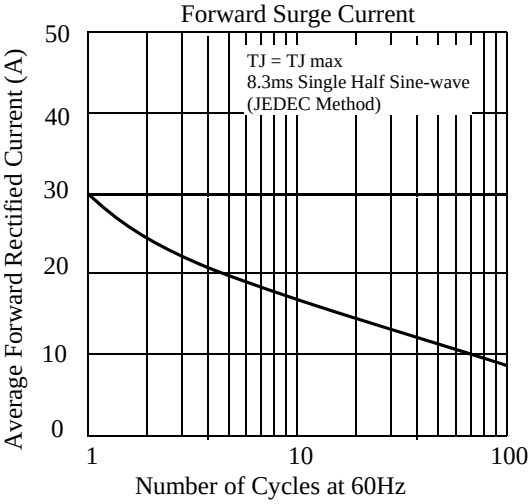


Fig 3. – Typical Instantaneous Forward Characteristics

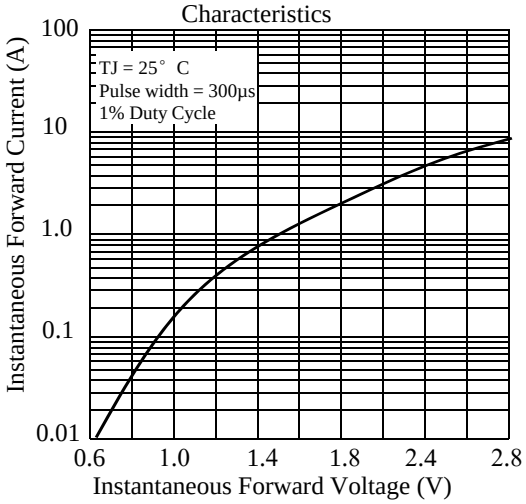


Fig 4. – Typical Reverse Characteristics

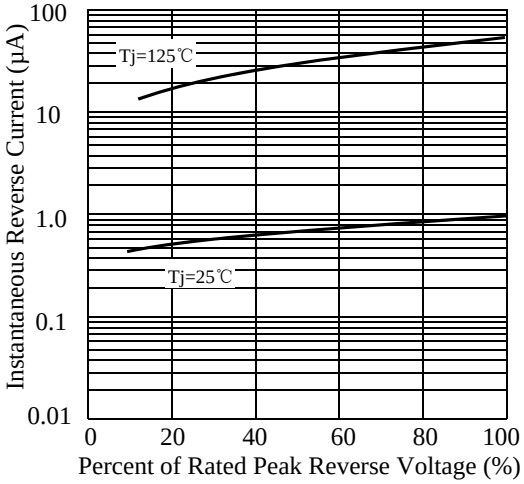


Fig 5. – typical transient thermal impedance

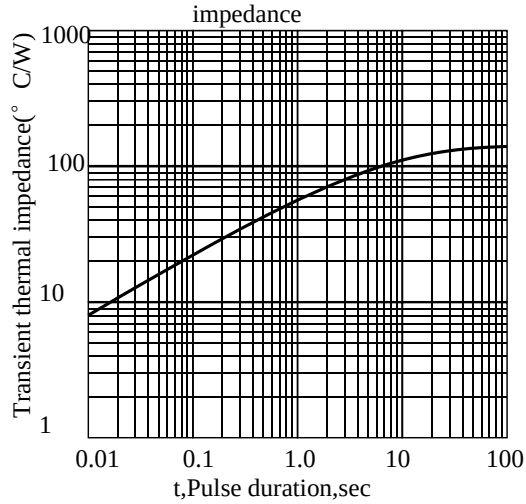
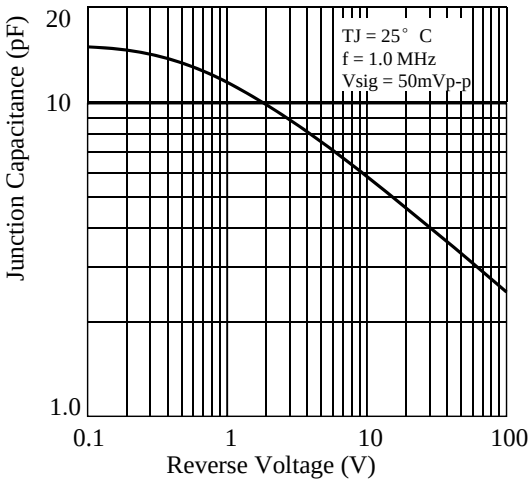


Fig 6. – Typical Junction Capacitance



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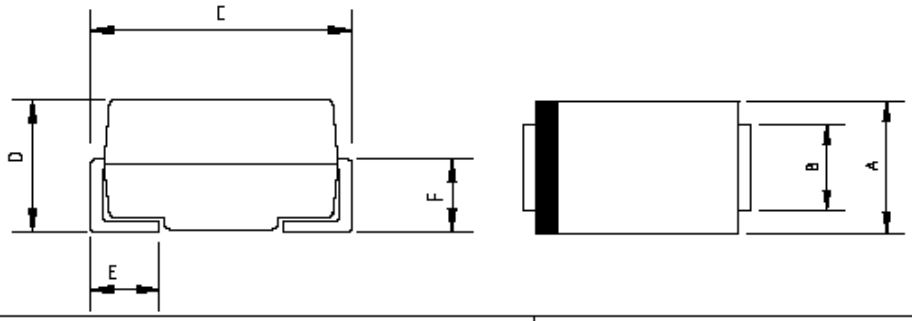
6. dimension:

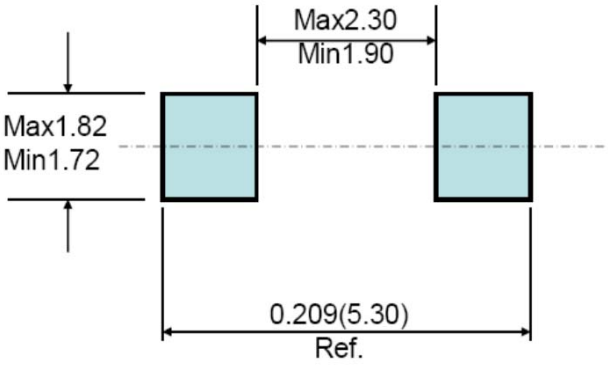
Package outline



Dimensions				
	inches		mm	
	Min.	Max.	Min.	Max.
A	0.086	0.110	2.2	2.8
B	0.051	0.067	1.3	1.7
C	0.185	0.209	4.7	5.3
D	0.067	0.100	1.7	2.55
E	0.035	0.059	0.9	1.5
F	0.035	0.059	0.9	1.5

Note:
DO-214AC
molded plastic case
The marking band indicates the cathode

Mounting Pad Layout
---SMA



DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.

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