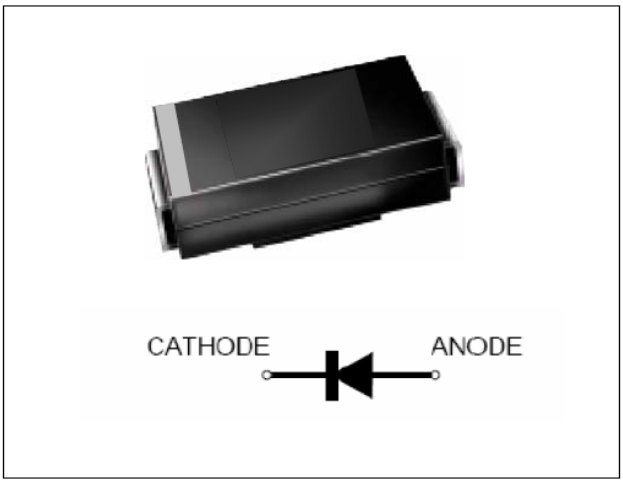
EFM101 thru EFM108

Surface Mount Glass Passivated Super Fast Rectifiers

Reverse Voltage 50 to 600V 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 TA=75°C with no thermal runaway
* Typical IR less than 1.0μA
* High temperature soldering guaranteed: 260°C/10 seconds



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: 0.0026 oz., 0.075 g

Handling precautin:None

We declare that the material of product compliance with ROHS requirements

Electrical Characteristic

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

Parameter Symbol	symbol	EFM 101	EFM 102	EFM 103	EFM 104	EFM 105	EFM 106	EFM 107	EFM 108	Unit
Device marking code		EF1	EF2	EF3	EF4	EF5	EF6	EF7	EF8	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RSM voltage	V_{RSM}	35	70	105	140	210	280	350	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum average forward rectified current at T_C = 75°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)	$R\theta J_A$ $R\theta J_C$	150 45								°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	EFM 101	EFM 102	EFM 103	EFM 104	EFM 105	EFM 106	EFM 107	EFM 108	Unit
Maximum instantaneous forward voltage at 1.0A	V_F	0.95				1.25		1.7		V
Maximum DC reverse current TJ = 25°C at rated DC blocking voltage TJ = 125°C	IR	5.0 100								μA
Max reverse recovery time (Note 1)	trr	35								ns
Typical junction capacitance at 4.0V, 1MHz	CJ	15.0								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.

EFM101 thru EFM108

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

Fig. 1 – Forward Current Derating Curve

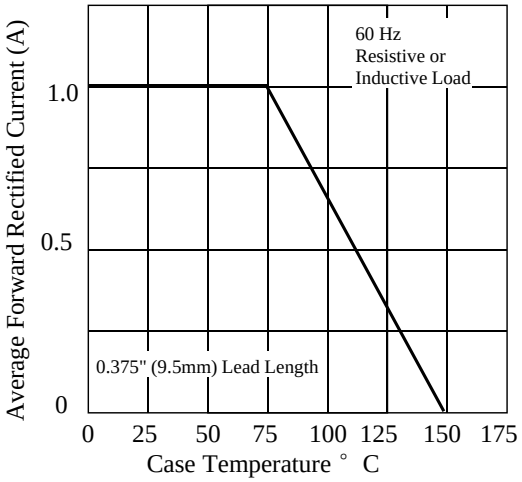


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

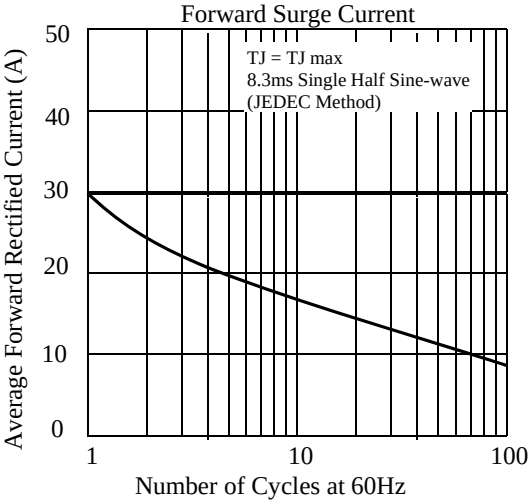


Fig 3. – Typical Instantaneous Forward Characteristics

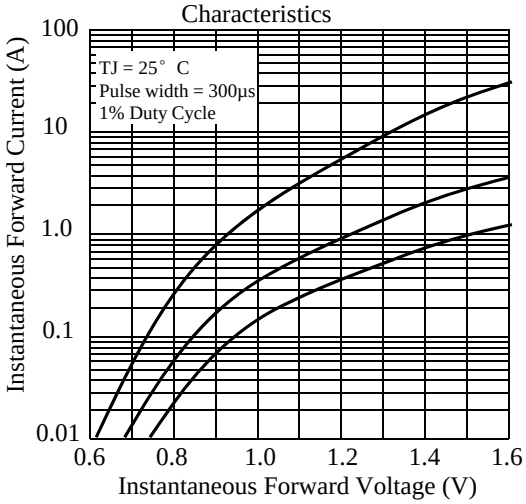


Fig 4. – Typical Reverse Characteristics

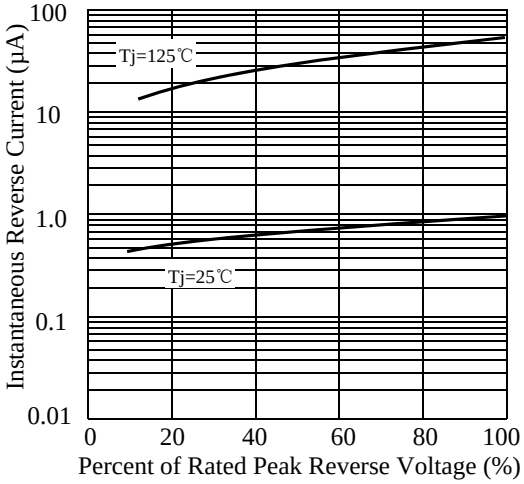


Fig 5. – typical transient thermal impedance

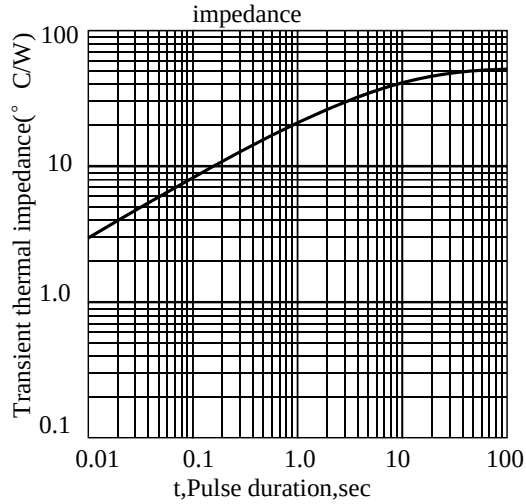
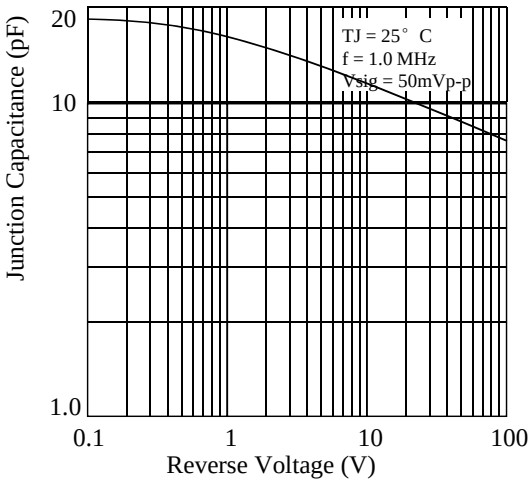
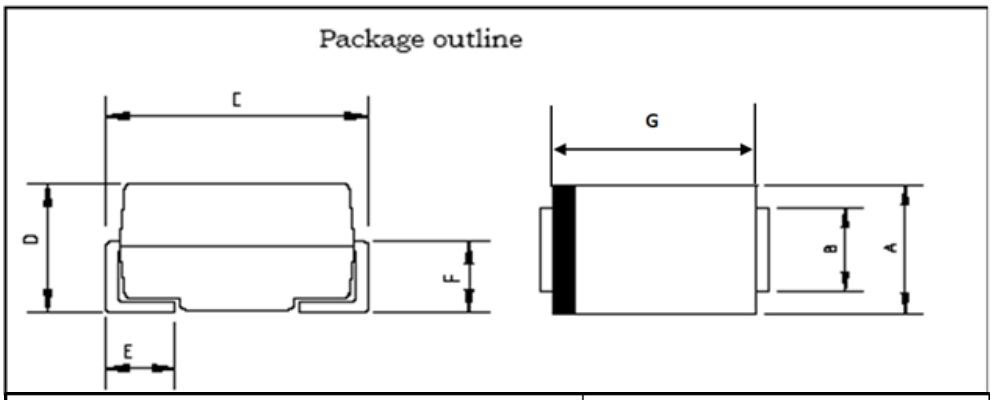


Fig 6. – Typical Junction Capacitance

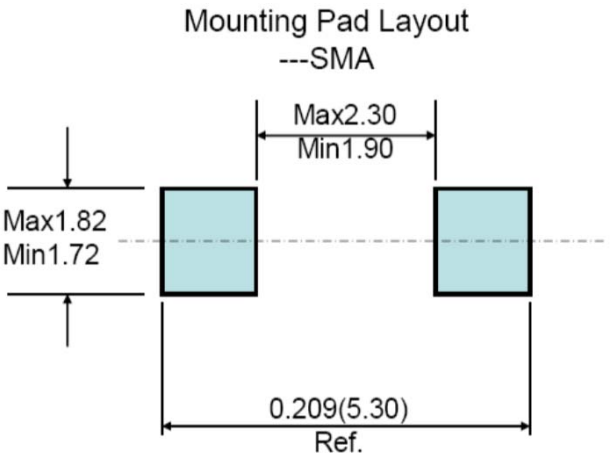


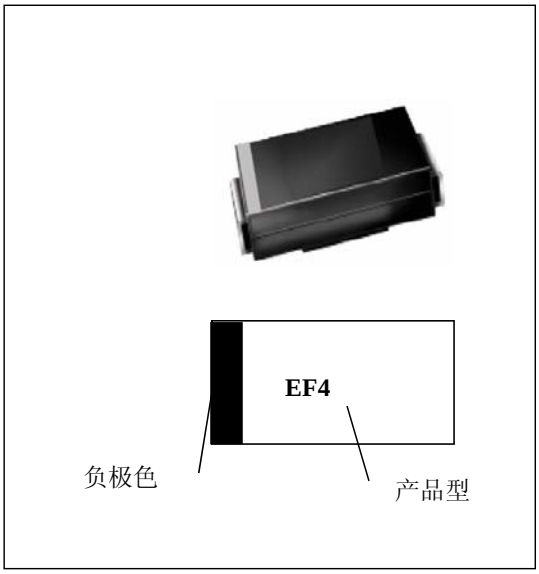
EFM101 thru EFM108

3. dimension:



Dimensions					Note:
	inches		mm		DO-214AC
	Min.	Max.	Min.	Max.	molded plastic case
A	0.086	0.11	2.2	2.8	The marking band indicates the
B	0.051	0.067	1.3	1.7	cathode
C	0.185	0.209	4.7	5.3	
D	0.079	0.089	2	2.25	
E	0.035	0.059	0.9	1.5	
F	0.035	0.059	0.9	1.5	
G	0.165	0.189	4.2	4.8	





EFM104： EF----超快速二极管；M---贴片产品；1----IF=1A; 04----VB=200V;

EFM101 thru EFM108

4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2010-4-13
2	1.增加包装规范；2增加建议焊盘尺寸；	周杰	2011-6-15
3	修改热阻和降额温度	谭志伟	2016-9-27
4	增加G尺寸	谭志伟	2021-6-30
5	更新TRR标注	谭志伟	2022-6-16