First Semiconductor

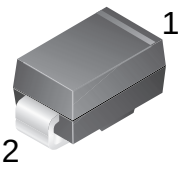
FFM201AG THRU FFM207AG

Chip Silicon Rectifier

2.0A Fast Recovery Rectifiers-50-1000V

Package outline

DO-214AC(SMA)





1.Cathode 2. Anode

Dimensions in inches and (millimeters)

Features

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- High current capability.
- Fast switching for high efficiency.
- High surge current capability.
- Glass passivated chip junction.
- Lead- free parts meet RoHS requirments.

Mechanical data

- Epoxy: UL94-V0 rated frame retardant
- Case: Molded plastic, JEDEC DO-214AC / SMAK
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Mounting Position: Any
- Weight: Approximated 0.07 gram

Maximum ratings (AT T_A=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_O			2.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			50	A
Reverse current	V_R = V_{RRM} T_J = 25°C	I_R			5.0	μA
	V_R = V_{RRM} T_J = 125°C				100	
Thermal resistance	Junction to ambient	$R_{\theta JA}$		65		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		22		pF
Storage temperature		T_{STG}	-55		+150	°C

SYMBOLS	V_{RRM} *1 (V)	V_{RMS} *2 (V)	V_R *3 (V)	V_F *4 (V)	T_{RR} *5 (nS)	Operating temperature T_J, (°C)
FFM201AG	50	35	50	1.30	150	-55 to +150
FFM202AG	100	70	100			
FFM203AG	200	140	200			
FFM204AG	400	280	400			
FFM205AG	600	420	600		250	
FFM206AG	800	560	800		500	
FFM207AG	1000	700	1000			

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@I_F=2.0A

*5 Maximum Reverse recovery time, note 1

Note 1. Reverse recovery time test condition, I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

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Typical Characteristics

Fig.1 Forward Current Derating Curve

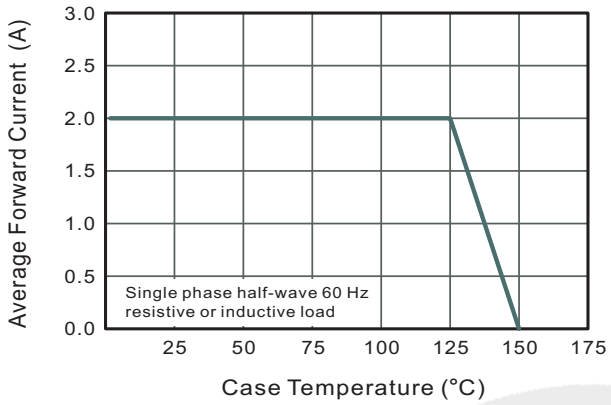


Fig.2 Typical Reverse Characteristics

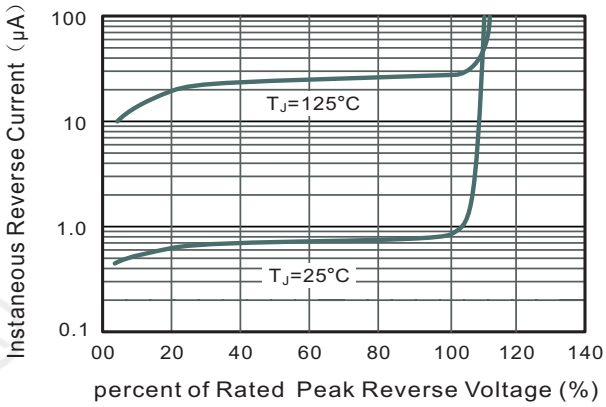


Fig.3 Typical Instaneous Forward Characteristics

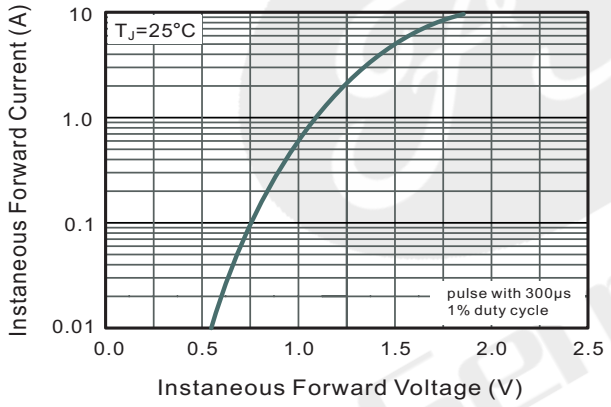


Fig.4 Typical Junction Capacitance

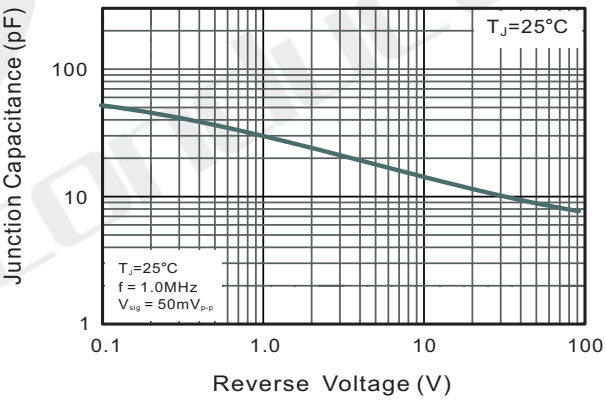
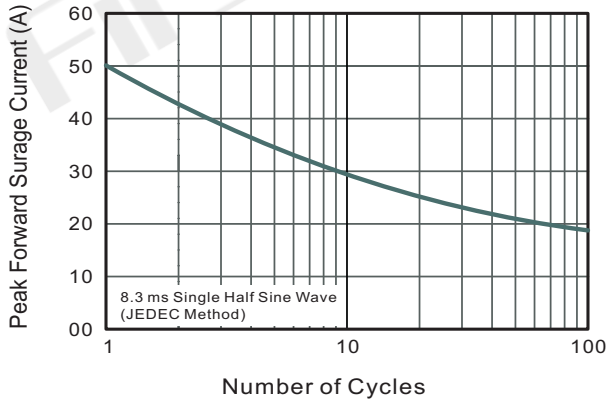


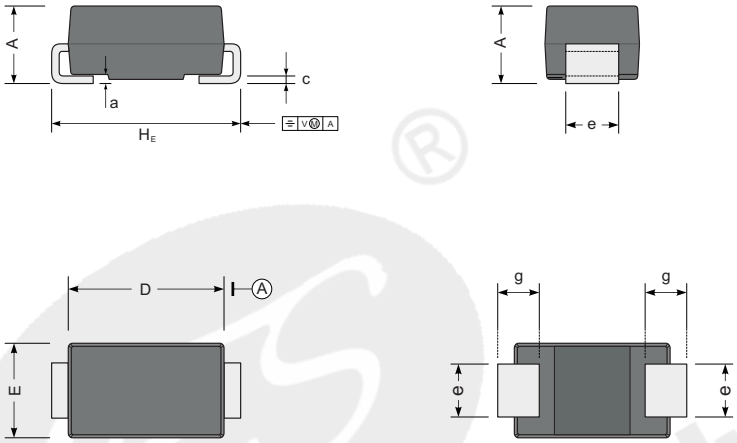
Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



Package Dimension

SMA

Unit: mm



UNIT		A	D	E	H_E	c	e	g	a
mm	max	2.2	4.5	2.7	5.2	0.31	1.6	1.5	0.3
	min	1.9	4.0	2.3	4.7	0.15	1.3	0.9	
mil	max	87	181	106	205	12	63	59	12
	min	75	157	91	185	6	51	35	

The recommended mounting pad size

