

**SURFACE MOUNT  
FAST RECOVERY RECTIFIERS**

**REVERSE VOLTAGE – 1000 Volts  
FORWARD CURRENT – 1.0 Ampere**

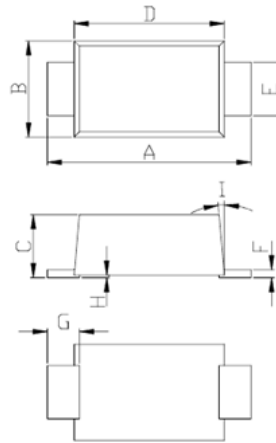
**FEATURES**

- Fast switching for high efficiency
- For surface mounted applications
- Glass passivated chip
- Low reverse leakage current
- Low forward voltage drop
- High current capability

**MECHANICAL DATA**

- Case: JEDEC DO-219AA
- Case Material: "Green" molding compound, UL Flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free".
- Terminals: Lead Free Plating (Matte Tin Finish.)
- Component in accordance to RoHs 2002/95/EC
- Marking code: R1M
- Weight: 16.3 mg (Approximate)

**F1A**



F1A			
DIM.	MIN.	TYP.	MAX.
A	3.50	3.80	3.90
B	1.70	1.90	2.00
C	0.81	1.18	1.20
D	2.70	2.80	2.90
E	0.80	1.00	1.35
F	0.05	0.15	0.30
G	0.35	0.60	0.85
H	0.03	0.07	0.10
I	0°	5°	8°

All dimension in millimeter.

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

**ABSOLUTE RATING**

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	1000	V
Maximum DC blocking voltage	$V_{DC}$	1000	V
Average rectified forward current	$I_{(AV)}$	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30	A
Operating temperature range	$T_J$	-55 ~ +150	°C
Storage temperature rang	$T_{STG}$	-55 ~ +150	°C

**STATIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITION	SYMBOL	TYP.	MAX	UNIT
Forward voltage (Note 1)	$I_F=1.0A$ $T_J=25°C$	$V_F$	1.1	1.3	V
Leakage current	$V_R=1000V$ $T_J=25°C$ $T_J=100°C$	$I_R$	0.5 20	5 200	µA
Typical junction capacitance (Note 2)		$C_J$	5		pF

**THERMAL PERFORMANCE**

PARAMETER	SYMBOL	TYP.	UNIT
Typical Thermal Resistance (Note 3)	$R_{thJA}$	110	°C/W
	$R_{thJL}$	25	
	$R_{thJC}$	20	

**DYNAMIC ELECTRICAL CHARACTERISTICS**

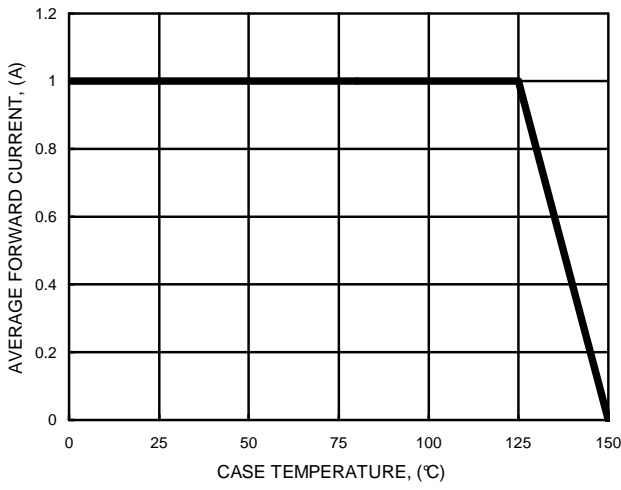
PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Reverse recovery time	$I_F=0.5A, I_{rr}=0.25A, I_R=1.0A$	$T_{RR}$	500	ns

**Note :**

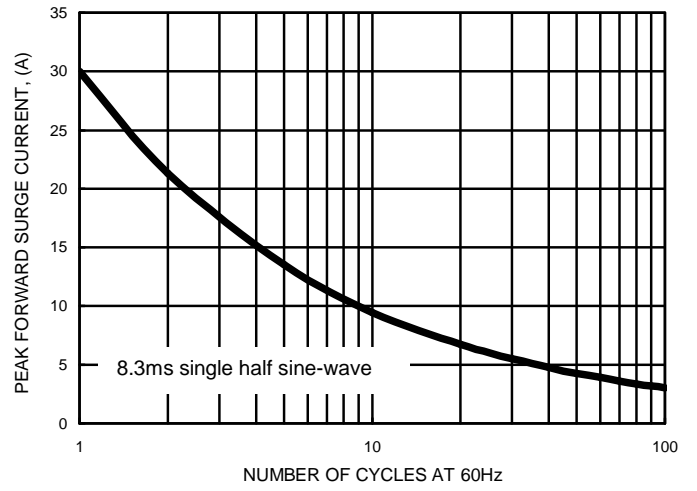
- (1) 300us pulse width, 2% duty cycle.
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- (3) Thermal resistance test performed in accordance with JESD-51. Unit mounted on glass-epoxy substrate with 5 x 7 mm copper pad.

REV.2, Nov.-2014, KSEP05

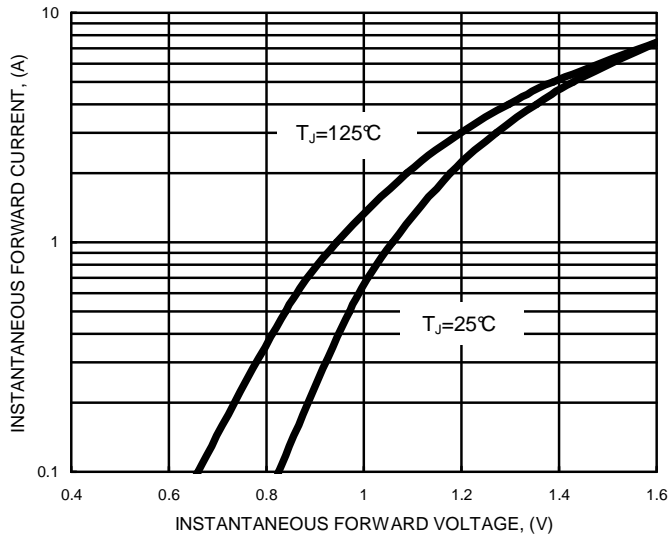
**FIG.1- FORWARD CURRENT DERATING CURVE**



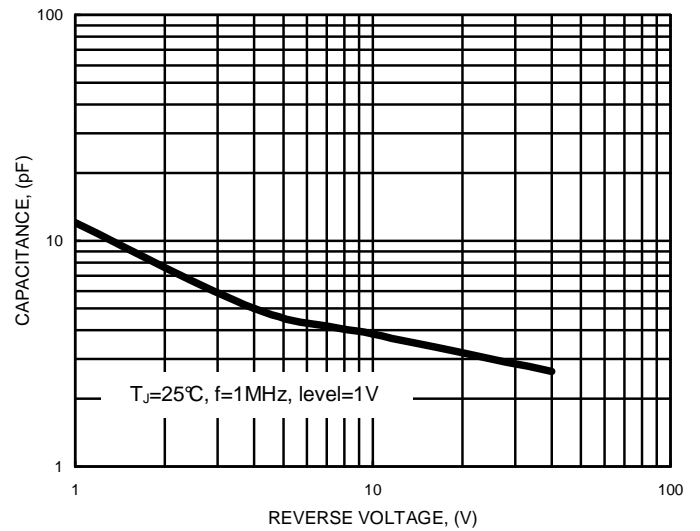
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



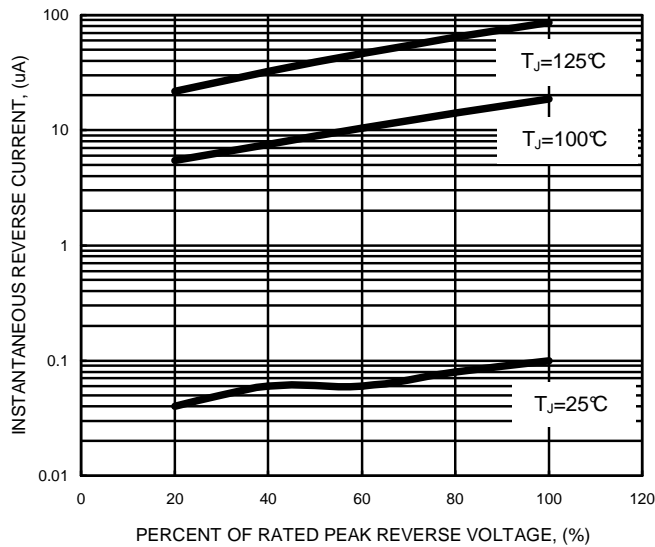
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



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