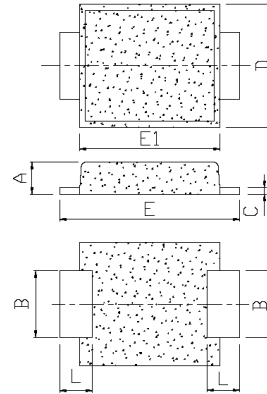


**SURFACE MOUNT
FAST RECOVERY RECTIFIER**
**REVERSE VOLTAGE – 50 to 1000 Volts
FORWARD CURRENT – 1.0 Ampere**
FEATURES

- Very low profile package – 0.9mm
- Glass passivated chip
- For surface mounted applications
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- Fast switching for high efficiency

MECHANICAL DATA

- Case: JEDEC DO-221AC
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.)
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead Free Plating (Matte Tin Finish.)
- Reliability tested in accordance with AEC-Q101
- Component in accordance to RoHs 2002/95/EC

SMA FLAT


SMA FLAT		
DIM.	MIN.	MAX.
A	0.90	1.10
B	1.25	1.65
C	0.15	0.40
D	2.25	2.95
E	4.80	5.60
E1	3.95	4.60
L	0.75	1.50
All dimension in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER			SYMBOL	FR1AA	FR1BA	FR1DA	FR1GA	FR1JA	FR1KA	FR1MA	UNIT
Device marking code			Note	FR1AA	FR1BA	FR1DA	FR1GA	FR1JA	FR1KA	FR1MA	---
Maximum Repetitive Peak Reverse Voltage			V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage			V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage			V _{DC}	50	100	200	400	600	800	1000	V
Average Rectified Output Current @T _L =125°C			I _(AV)	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave			I _{FSM}	30							A
Operating junction temperature range			T _J	-55 to +150							°C
Storage temperature range			T _{STG}	-55 to +150							°C
PARAMETER		TEST CONDITIONS	SYMBOL	Max.							UNIT
Forward Voltage (1)	IF=1.0A	Tj=25°C	V _F	1.3							V
Leakage Current (1)	VR=V _{DC}	Tj=25°C Tj=125°C	I _R	5 200							uA
Maximum Reverse Recovery Time (Note 2)			T _{RR}	150				250	500		ns
THERMAL CHARACTERISTIC			SYMBOL	Typical							UNIT
Typical junction capacitance (3)			C _J	15							pF
Typical thermal resistance _ Junction to Case (4)			R _{θJC}	26							°C/W
Typical thermal resistance _ Junction to Ambient (4)			R _{θJA}	85							°C/W
Typical thermal resistance _ Junction to Lead (4)			R _{θJL}	18							°C/W

Note :

- (1) 300us Pulse width, 2% Duty cycle.
- (2) Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.
- (3) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- (4) Thermal Resistance test performed in accordance with JESD-51. Unit mounted on 0.75t glass-epoxy substrate with foot print copper pad. $R_{\theta JL}$ is measured at the lead of cathode band, $R_{\theta JC}$ is measured at the top centre of body.

REV. 3, Sep-2012, KSEP01

FIG.1-FORWARD CURRENT DERATING CURVE

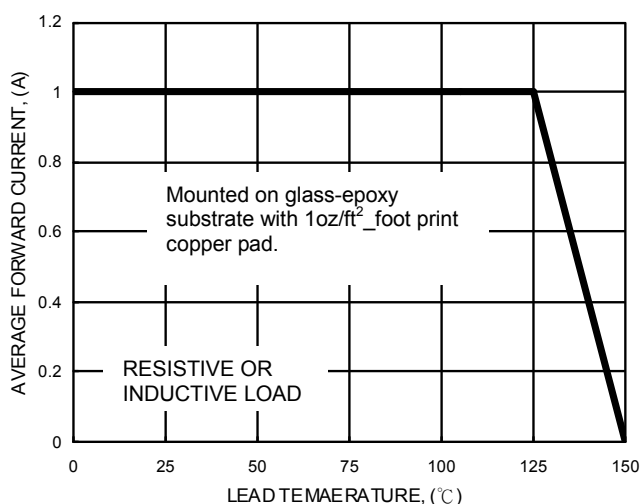


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

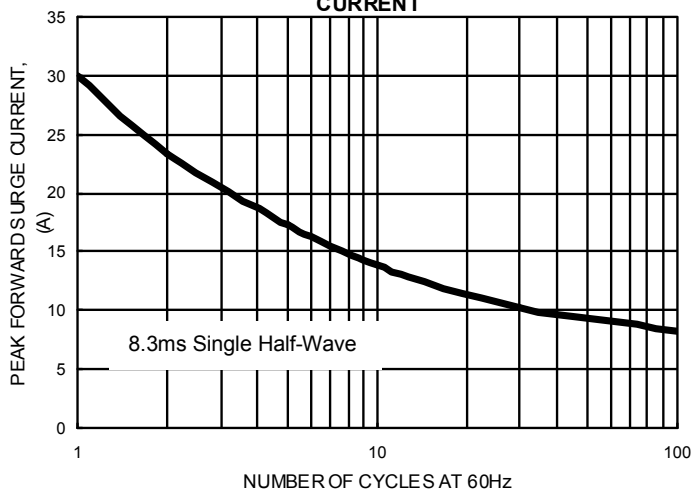


FIG.3- TYPICAL FORWARD CHARACTERISTICS

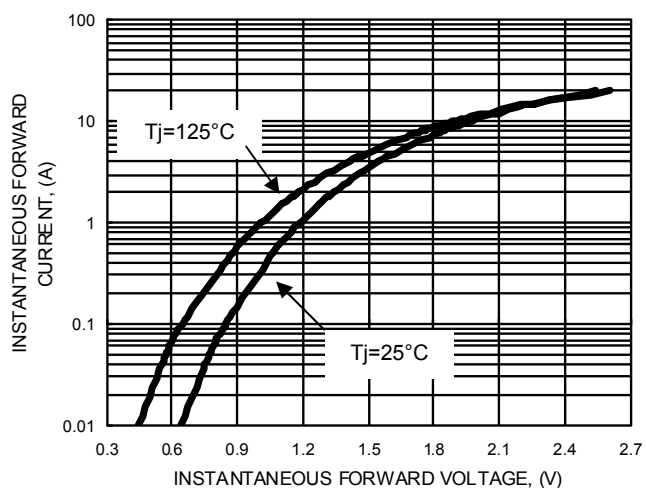


FIG.4- TYPICAL JUNCTION CAPACITANCE

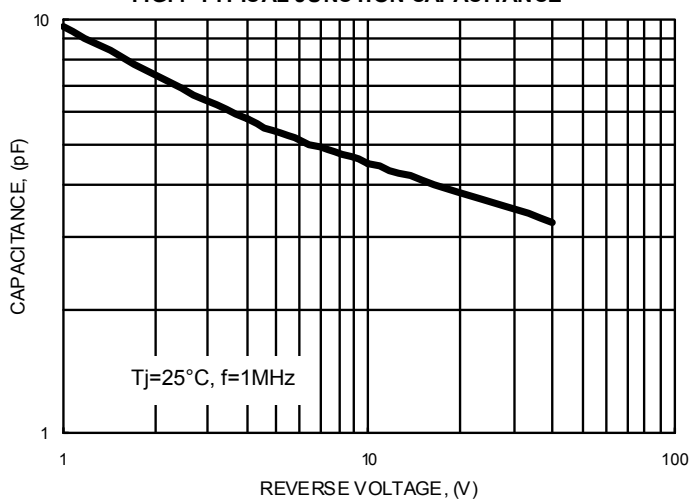
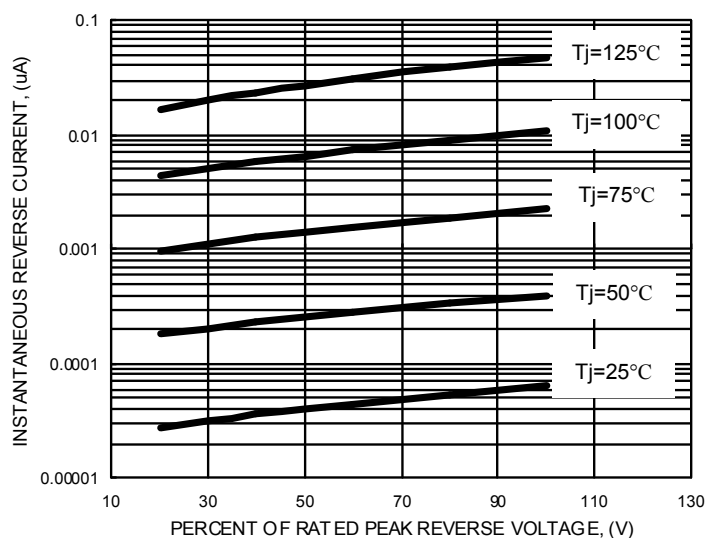


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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