2A, 100-200V Ultrafast Surface Mount Rectifier

FEATURES

- AEC-Q101 qualified
- Planar technology
- Ideal for automated placement
- Low reverse leakage
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	2	A
V_{RRM}	100-200	V
I_{FSM}	28	A
$T_{J\ MAX}$	175	°C
Package	Micro SMA	

Pb-Free RoHS COMPLIANT HALOGEN FREE

APPLICATIONS

- High frequency switching
- DC/DC converter
- Snubber

MECHANICAL DATA

- Case: Micro SMA
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: Indicated by cathode band
- Weight: 0.006g (approximately)

Micro SMA

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)					
PARAMETER		**SYMBOL**	**PU2BMH**	**PU2DMH**	**UNIT**
Marking code on the device			P3	P4	
Repetitive peak reverse voltage		V_{RRM}	100	200	V
Reverse voltage, total rms value		$V_{R(RMS)}$	70	140	V
DC blocking voltage		V_{DC}	100	200	V
Forward current		I_F	2		A
Surge peak forward current single half sine-wave superimposed on rated load	8.3ms at T_A = 25°C	I_{FSM}	28		A
	1.0ms at T_A = 25°C		52		A
Junction temperature		T_J	-55 to +175		°C
Storage temperature		T_{STG}	-55 to +175		°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-lead thermal resistance	$R_{\Theta JL}$	28	°C/W
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	60	°C/W
Junction-to-case thermal resistance	$R_{\Theta JC}$	34	°C/W

Thermal Performance Note: Units mounted on PCB (5mm x 5mm Cu pad test board)

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage(1)	I_F = 1.0A, T_J = 25°C	V_F	0.90	-	V
	I_F = 2.0A, T_J = 25°C		0.99	1.05	V
	I_F = 1.0A, T_J = 125°C		0.76	-	V
	I_F = 2.0A, T_J = 125°C		0.84	0.90	V
Reverse current @ rated V_R(2)	T_J = 25°C	I_R	-	1	μA
	T_J = 125°C		-	15	μA
Reverse recovery time	I_F = 0.5A, I_R = 1.0A, Irr = 0.25A	t_{rr}	-	25	ns
	I_F= 1.0A, di/dt = 50A/μs, V_R = 30V		36	-	
Reverse recovery current	I_F = 2.0A, di/dt = 200A/μs, V_R = 100V	I_{RM}	3.8	-	A
Reverse recovery charge		Q_{rr}	57	-	nC
Reverse recovery time		t_{rr}	28	-	ns
Junction capacitance	1MHz, V_R = 4.0V	C_J	18	-	pF

Notes:

(1) Pulse test with PW = 0.3ms

(2) Pulse test with PW = 30ms

ORDERING INFORMATION

ORDERING CODE(1)	PACKAGE	PACKING
PU2xMH M3G	Micro SMA	3000 / 7" reel

Notes:

(1) “x” defines voltage from 100V(PU2BMH) to 200V(PU2DMH)

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

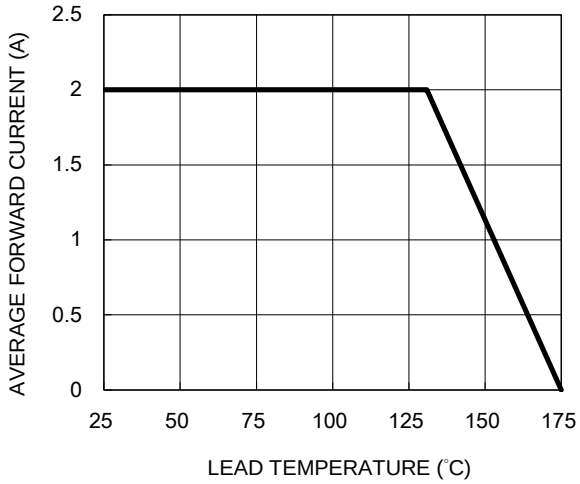


Fig.2 Typical Junction Capacitance

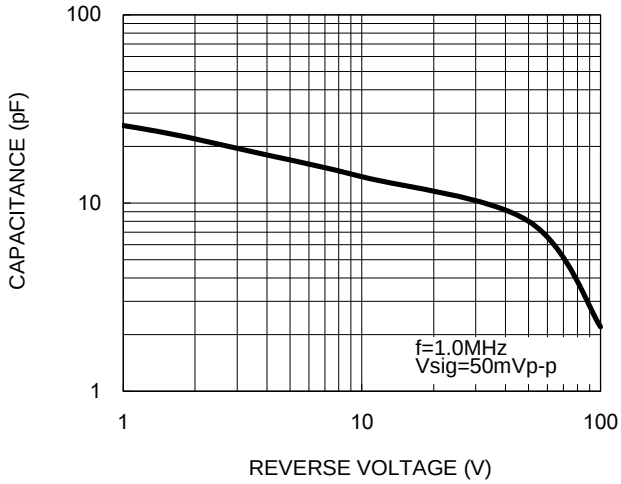


Fig.3 Typical Reverse Characteristics

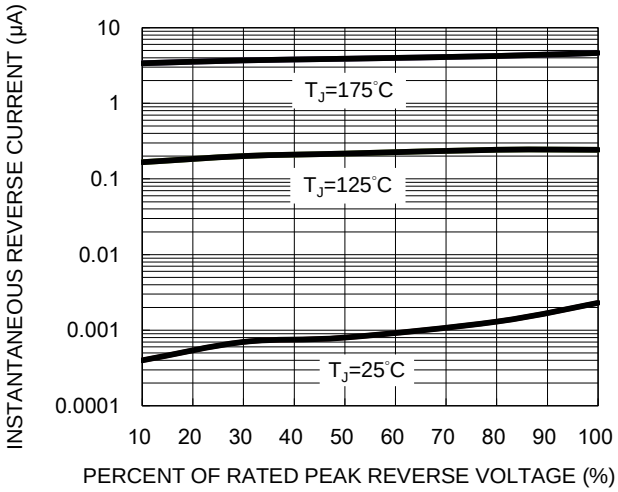


Fig.4 Typical Forward Characteristics

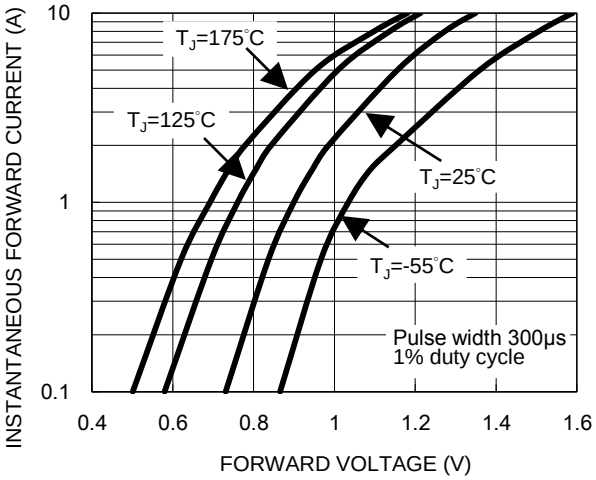
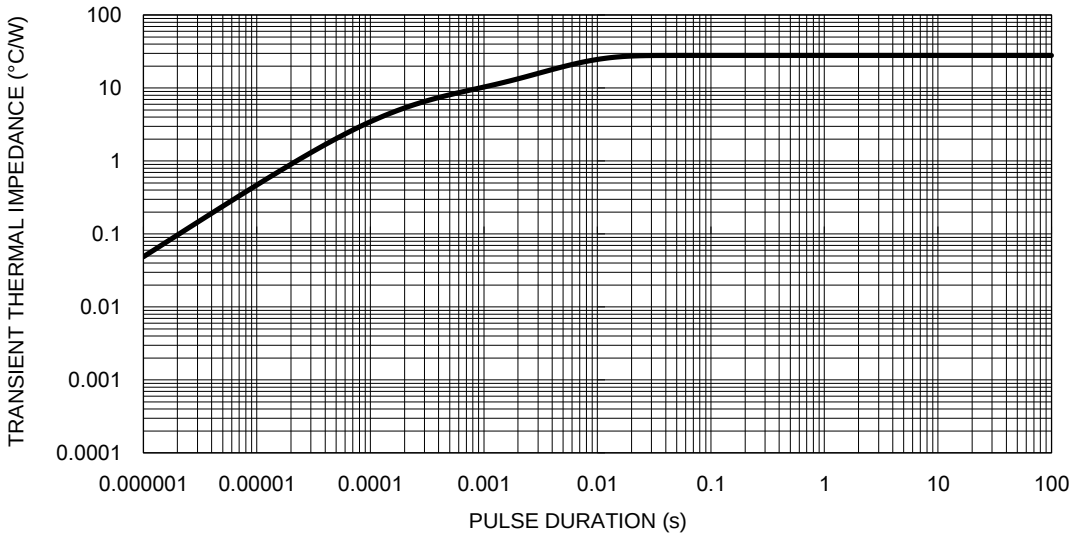
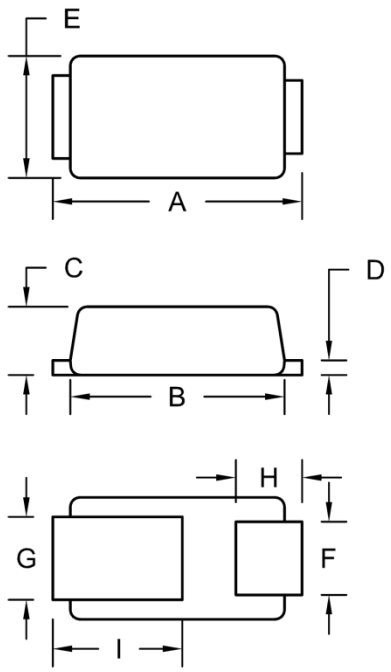


Fig.5 Typical Transient Thermal Impedance



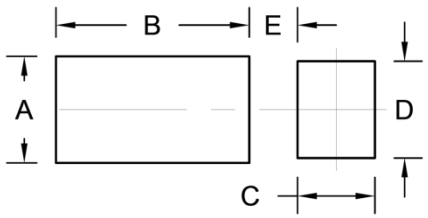
PACKAGE OUTLINE DIMENSIONS (Unit: Millimeters)

Micro SMA



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	2.30	2.70	0.091	0.106
B	2.10	2.30	0.083	0.091
C	0.63	0.73	0.025	0.029
D	0.10	0.20	0.004	0.008
E	1.15	1.35	0.045	0.053
F	0.65	0.85	0.026	0.034
G	0.75	0.95	0.030	0.037
H	0.55	0.75	0.022	0.030
I	1.10	1.50	0.043	0.059

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.10	0.043
B	2.00	0.079
C	0.80	0.031
D	1.00	0.039
E	0.50	0.020

MARKING DIAGRAM

P/N = Marking Code
YW = Date Code

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