BORN SEMICONDUCTOR

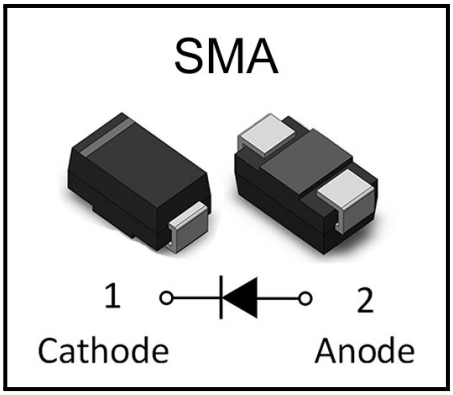
US2A-US2M

Ultra Fast Surface Mount Rectifiers

Features

- Plastic package has UL flammability Classification 94V-0
- Glass Passivated chip junction
- Built in strain relief
- Fast switching speed for high efficiency
- High temperature soldering guaranteed: 250°C/10 seconds

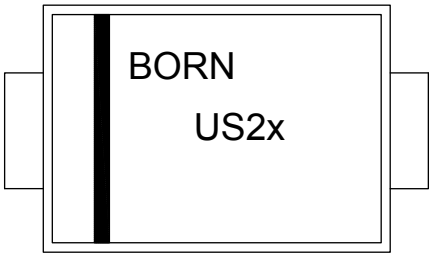
Package



General Description

- Case: JEDED DO-214AC transfer molded plastic
- Terminals: Solder plated, Solderable per
- MIL-STD-750,Method 2026
- Polarity: Color band denotes cathode end
- Weight:0.003 ounce,0.093 gram

Making Code



Ordering information

Part Number	US2A	US2B	US2D	US2G	US2J	US2K	US2M
Marking	US2A	US2B	US2D	US2G	US2J	US2K	US2M
Base qty	5K	5K	5K	5K	5K	5K	5K

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Revision: 2022-Jan-1-A

US2A-US2M

Ultra Fast Surface Mount Rectifiers

Maximum Ratings (@T_A=25°C unless otherwise noted)

Symbol	Characteristics		US2A	US2B	US2D	US2G	US2J	US2K	US2M	Unit
V_{RRM}	Maximum Repetitive Peak Reverse Voltage		50	100	200	400	600	800	1000	V
V_{RMS}	Maximum RMS Voltage		35	70	140	280	420	560	700	V
V_{DC}	Maximum DC Blocking Voltage		50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Maximum Average Forward Rectified Current		2.0							A
I_{FSM}	Non-repetitive peak forward surge current 8.3 ms singlehalf sine-wave		50							A
V_F	Maximum Forward Voltage at 2.0A DC		1.0			1.3	1.7			V
I_R	Maximum Reverse Current	T_j = 25°C	5							uA
		T_j = 125°C	100							
t_{rr}	Maximum Reverse Recovery Time(1)		50				100			nS
C_J	Typical Junction Capacitance(2)		50							pF
$R_{\theta JC}$	Typical Thermal Resistance(3)		60							°C/W
T_J	Operating Junction Temperature Range		-55 to +150							°C
T_{STG}	Storage Temperature Range		-55 to +150							°C

Notes:

(1)Measured with I_F=0.5A,I_R=1A,I_{RR}=0.25A.

(2)Measured at 1.0MHZ and applied reverse voltage of 4.0VDC.

(3)Thermal Resistance Junction to Ambient.

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US2A-US2M

Ultra Fast Surface Mount Rectifiers

Typical Performance Characteristics(T_J = 25°C, unless otherwise noted)

Figure 1:Typical Forward Current Derating Curve

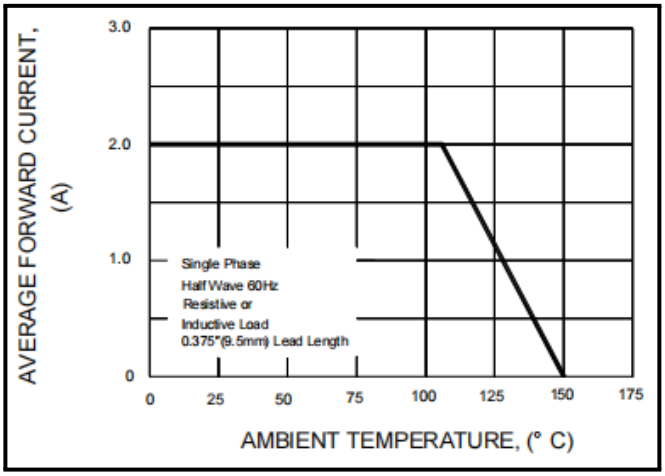


Figure 2:Maximum Non-Repetitive Peak Forward Surge Current

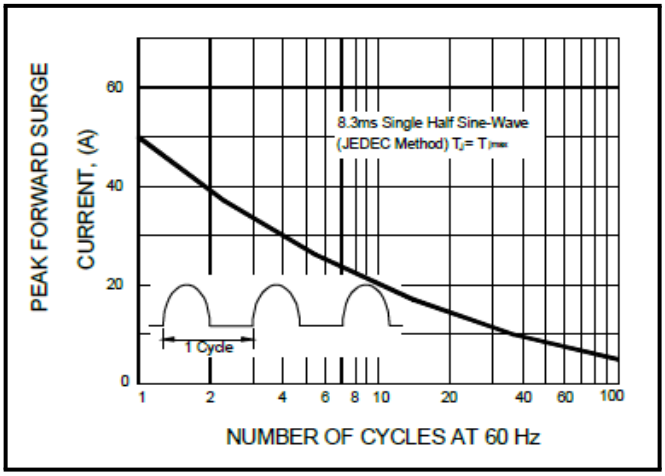


Figure 3:Typical Instantaneous Forward Characteristics

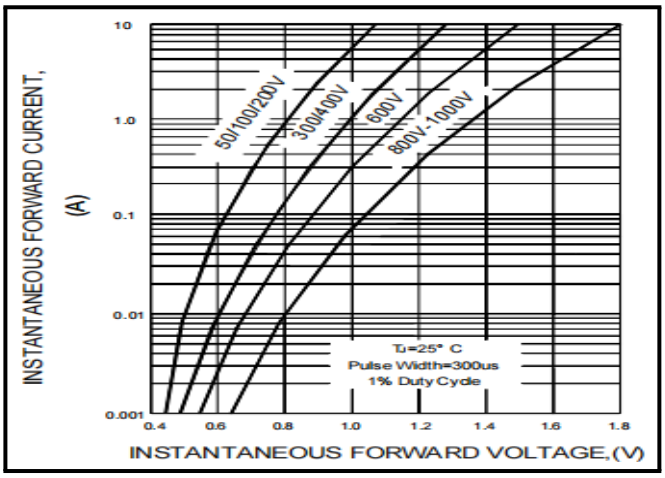


Figure 4: Typical Reverse Characteristics

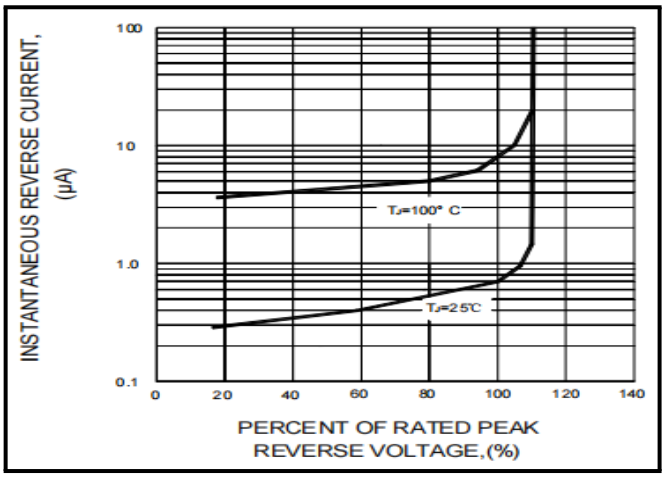


Figure 5:Typical Junction Capacitance

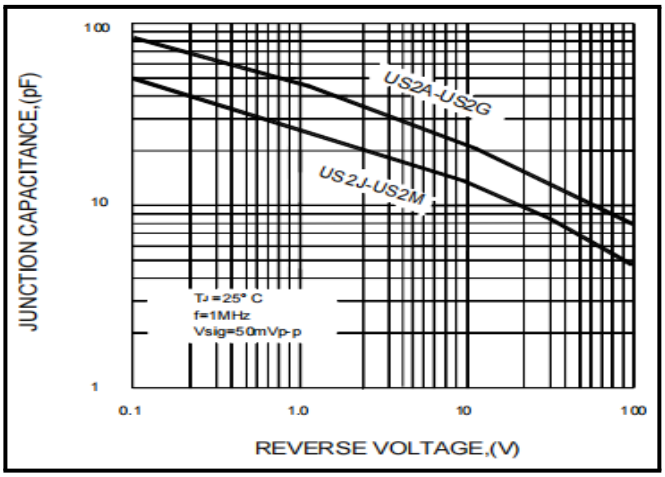
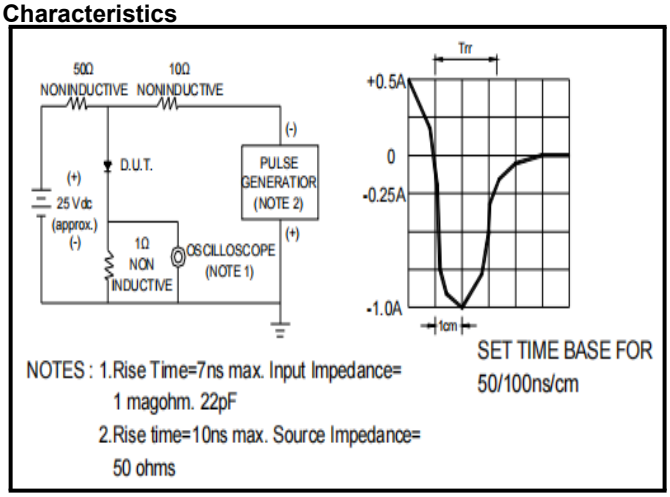


Figure 6:Text Circuit Diagram And Reverse Recovery Time Characteristics



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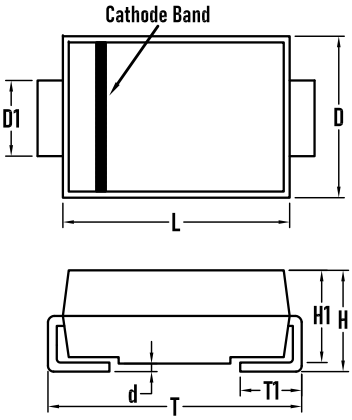
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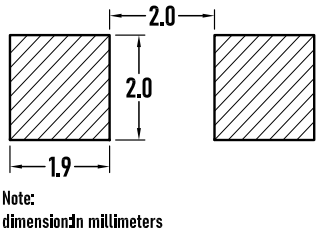
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US2A-US2M

Ultra Fast Surface Mount Rectifiers

Outline Drawing - SMA

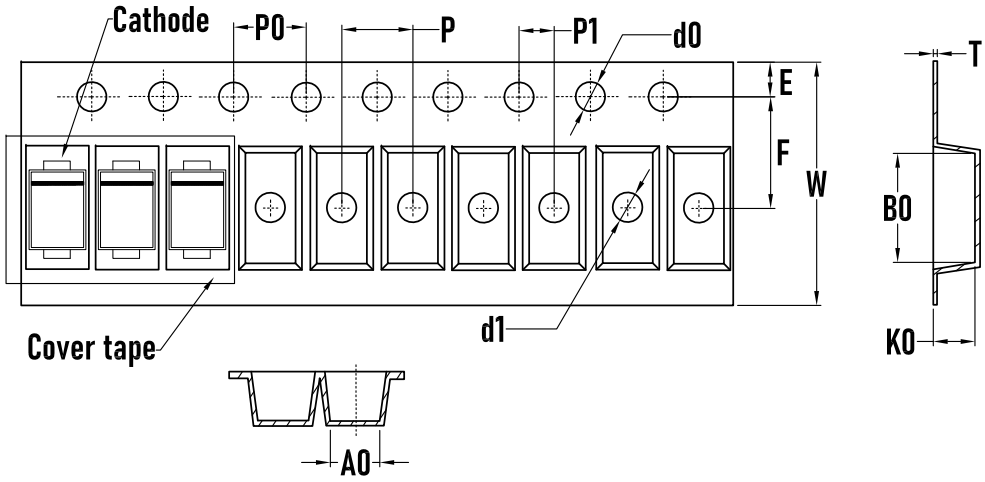




Note:
dimension:In millimeters

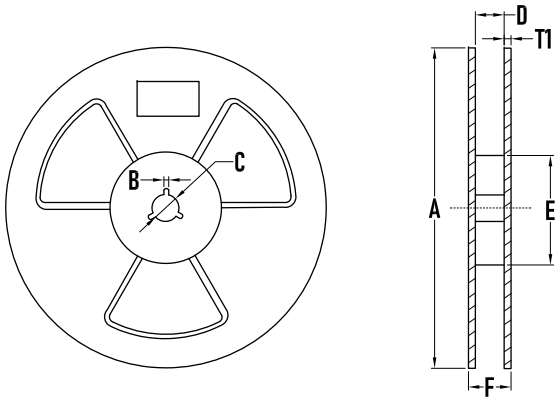
SYMBOL	MILLIMETER		Inches	
	MIN.	MAX.	MIN.	MAX.
D	2.5	2.9	0.098	0.114
D1	1.2	1.8	0.047	0.071
T	4.8	5.3	0.189	0.209
T1	0.8	1.5	0.031	0.059
d	–	0.2	–	0.008
H1	1.8	2.2	0.071	0.087
H	1.9	2.5	0.075	0.098
L	3.9	4.6	0.154	0.181

Packaging Tape - SMA



SYMBOL	MILLIMETER
A0	2.70
B0	5.10±0.1
d0	1.50±0.1
d1	1.50±0.1
E	1.75±0.1
F	5.50±0.1
K0	2.40±0.1
P	4.00±0.1
P0	4.00±0.1
P1	2.00±0.1
W	12.00±0.1
T	0.2±0.02

Packaging Reel



SYMBOL	MILLIMETER
A	323±2
B	3.0±0.2
C	15.0±0.5
D	13±2
E	73±2
T1	2.2±0.2
Quantity	5000PCS

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