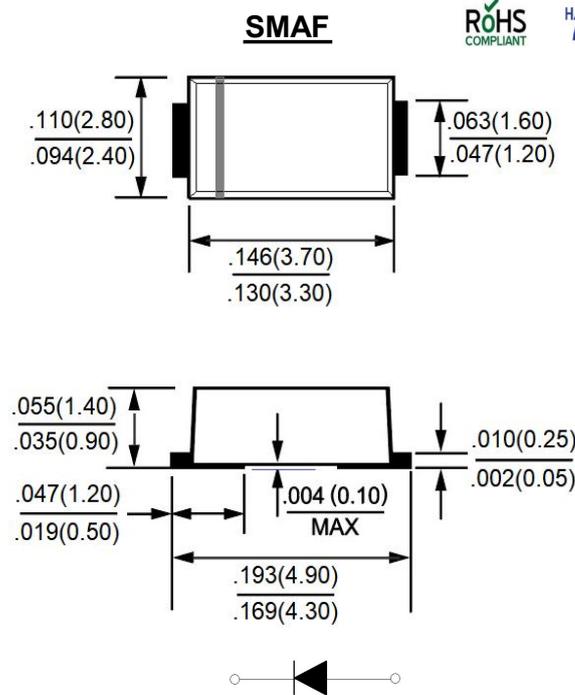


High Efficiency Surface Mount Rectifiers	Reverse Voltage: 50 to 1000V Forward Current: 2.0 Amp
<p><b>Features</b></p> <ul style="list-style-type: none"> <li>• Low profile package</li> <li>• For surface mounted applications</li> <li>• Glass passivated chip junction</li> <li>• High forward surge capability</li> <li>• Super fast reverse recovery time</li> <li>• High temperature soldering guaranteed 260 °C/10 seconds at terminals</li> </ul> <p><b>Mechanical Data</b></p> <ul style="list-style-type: none"> <li>• <b>Package:</b> SMAF Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free</li> <li>• <b>Terminals:</b> Tin plated leads, solderable per MIL-STD-750, Method 2026</li> <li>• <b>Polarity:</b> Cathode line denotes the cathode end</li> </ul> <p><b>Typical Applications</b></p> <p>For use in high frequency rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.</p>	<p><b>SMAF</b></p>  <p>ROHS COMPLIANT HALOGEN FREE</p> <p>Package Outline Dimensions in Inches (Millimeters)</p>

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter&Test Conditions	SYM.	US2AF	US2BF	US2DF	US2GF	US2JF	US2KF	US2MF	Unit
Device marking code		US2AF	US2BF	US2DF	US2GF	US2JF	US2KF	US2MF	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	I <sub>O(AV)</sub>	2.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load	I <sub>FSM</sub>	50							A
Maximum Thermal Resistance, Junction To Ambient (Note 1)	R <sub>θJA</sub>	150							°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C

### Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

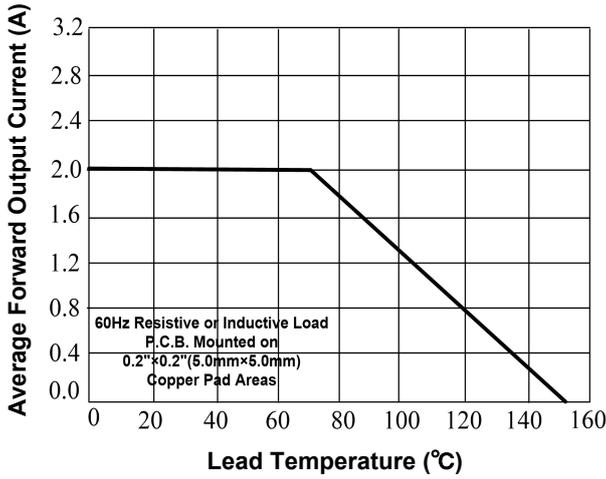
Parameter&Test Conditions	SYM.	US2AF	US2BF	US2DF	US2GF	US2JF	US2KF	US2MF	Unit
Maximum Instantaneous Forward Voltage IFM =2A	V <sub>FM</sub>	1			1.3	1.7			V
Maximum DC reverse current at rated DC blocking voltage	I <sub>R</sub>	5							μA
		200							
Maximum reverse recovery time(Note 2)	T <sub>rr</sub>	50				75			ns
Typical junction capacitance(Note 3)	C <sub>J</sub>	32			17	12			pF

**Notes:**

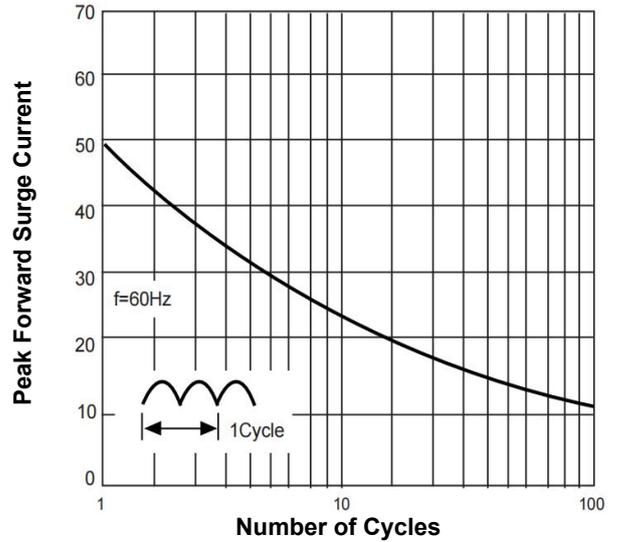
1. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas.
2. Reverse recovery time test condition: IF=0.5A IR=1.0A I<sub>rr</sub>=0.25A .
3. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
4. The typical data above is for reference only.

**Rating and Characteristic Curves**

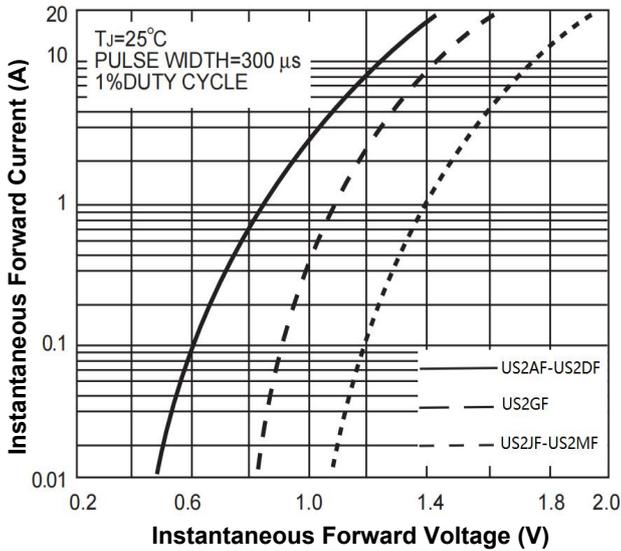
**FIG. 1- DERATING CURVE OUTPUT RECTIFIED**



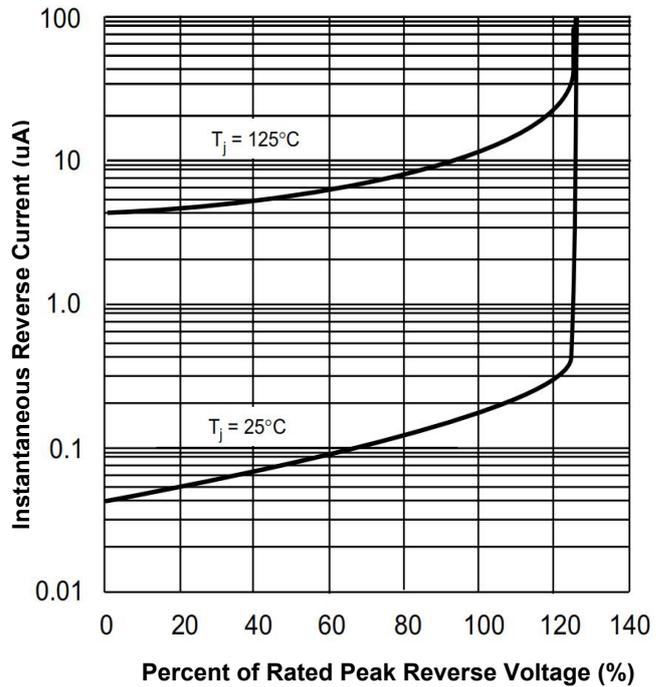
**FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG**



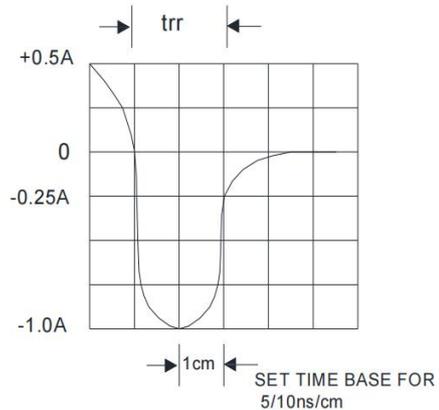
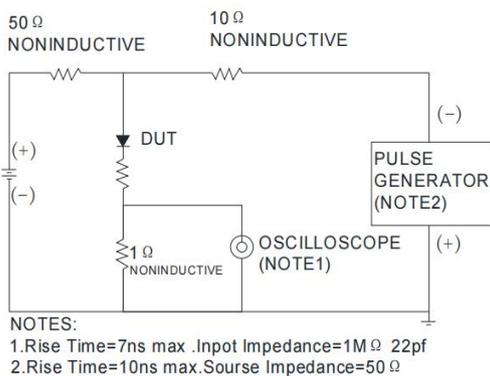
**FIG. 3- TYPICAL FORWARD VOLTAGE**



**FIG. 4- TYPICAL REVERSE LEAKAGE**

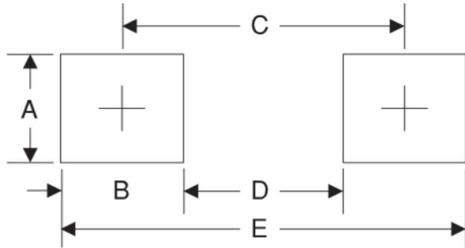


**FIG. 5- Diagram of circuit and Testing wave form of reverse recovery**



The curve above is for reference only.

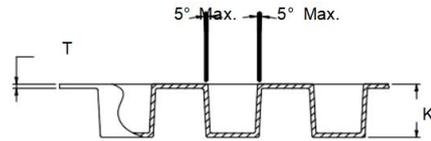
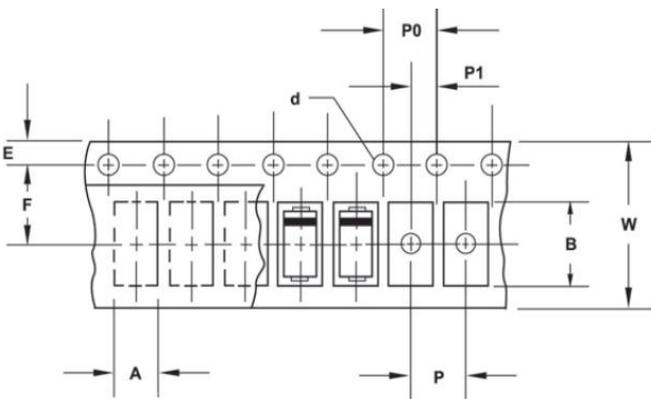
**Recommended Pad Layout**



SYMBOL	Millimeters
A	1.70
B	2.50
C	3.90
D	1.50
E	6.50

**Package Information**

**Carrier Dimension(mm)**



W	F	d	E
12.0	5.5	∅ 1.55	1.75
A	B	K	T
2.9	4.95	1.35	0.25
P0	P1	P	Tolerance
4.0	2.0	4.0	0.10

**Package Specifications**

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SMAF	11'	278	5	290	10	310*310*400	100
	13'	330	10	340	20	370*360*360	200

**Legal Disclaimer Notice**

All specifications are subject to be changed without notice to improve reliability function, design, etc. JUXIN makes no warranty, or guarantee regarding the suitability of the products for any purpose. To the extent permitted by applicable law, JUXIN disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement.

Statements regarding the suitability of products for certain types of applications are based on JUXIN's ideas of typical requirements that are often placed on JUXIN products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and specifications may differ applications and performance may vary over time.

All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify JUXIN's terms and conditions of purchase, including but not limited to the warranty expressed therein. Except as expressly indicated in writing, JUXIN products are not designed for use in medical, life saving, or life-sustaining applications or for any other applications in which the failure of the JUXIN product could result in personal injury or death. Customers using or selling JUXIN products not expressly indicated for use in such applications do so at their own risk. Please contact authorized JUXIN personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by forbid or otherwise, to any intellectual property rights is granted by this document or by any conduct of JUXIN. Product names and markings noted herein may be trademarks of their respective owners.