



***S1X SERIES***

***SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER***

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*<http://www.cenxelec.com.cn>*

# S12 THRU S120

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER



**REVERSE VOLTAGE:** 20 to 200 VOLTS

**FORWARD CURRENT:** 1.0 AMPERE

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- High current capacity
- Built-in strain relief
- Low profile package
- Metal to silicon rectifier, majority carrier conduction
- High surge capacity
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering : 260°C /10 seconds at terminals

### MECHANICAL DATA

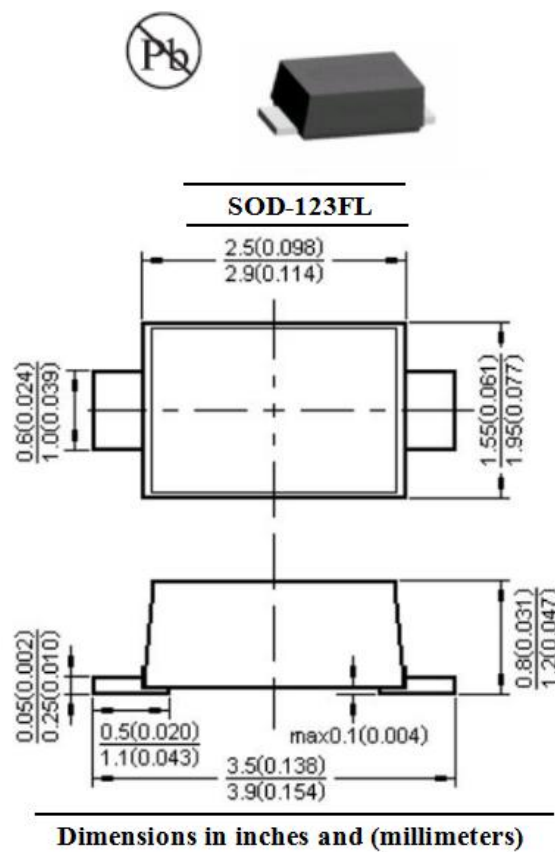
Case: Molded plastic, SOD-123FL

Terminals: Pure tin plated, lead free

Polarity: Indicated by cathode band

Packaging: 8mm tape per EIA STD RS-481

Weight: 0.022 gram



### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	<i>S12</i>	<i>S13</i>	<i>S14</i>	<i>S15</i>	<i>S16</i>	<i>S19</i>	<i>S110</i>	<i>S115</i>	<i>S120</i>	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	90	100	150	200	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	63	70	105	140	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	90	100	150	200	Volts
Maximum Average Forward Rectified Current at T <sub>L</sub> (See Fig. 1)	I <sub>(AV)</sub>	1.0									Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30									Amp
Maximum Forward Voltage at 1.0A (Note 1)	V <sub>F</sub>	0.55			0.75		0.80		0.95		Volts
Maximum Reverse Current           at T <sub>A</sub> =25℃ at Rated DC Blocking Voltage       T <sub>A</sub> =125℃	I <sub>R</sub>	0.5 20									mAmp
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub> R <sub>θJL</sub>	100 45									℃/W
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150									℃
Storage Temperature Range	T <sub>stg</sub>	-55 to +150									℃

NOTES: 1- Pulse test: 300μs pulse width, 1% duty cycle

2- P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) Copper Pad Areas

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### RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

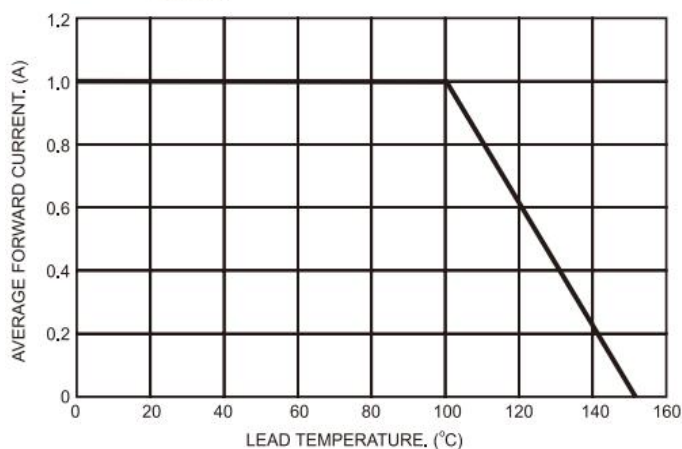


FIG.2- MAXIMUM REPETITIVE FORWARD SURGE CURRENT

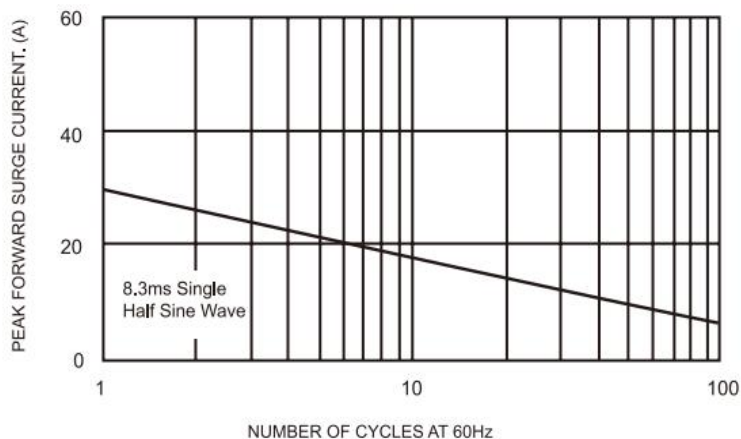


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

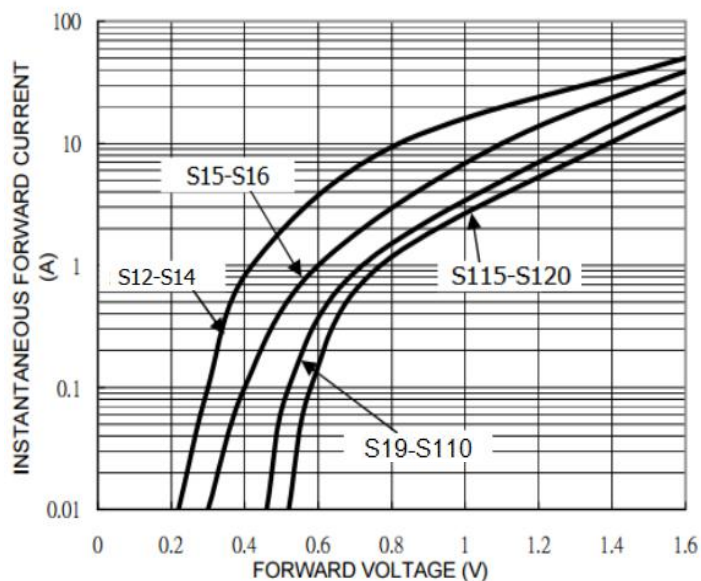


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

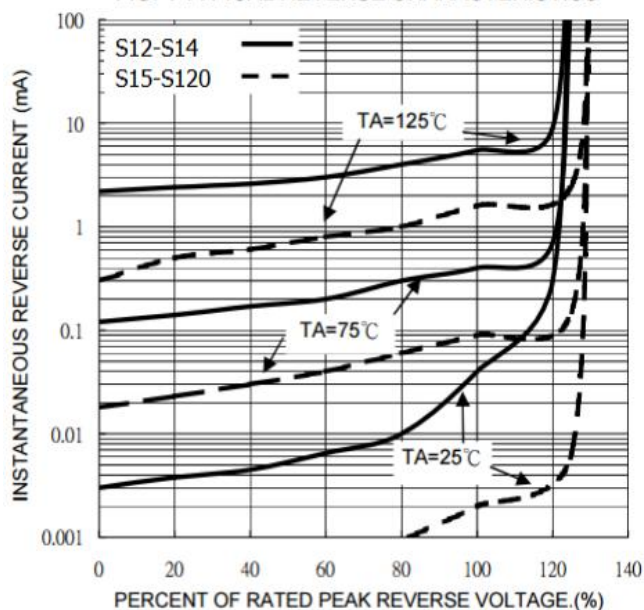


FIG.5- TYPICAL JUNCTION CAPACITANCE

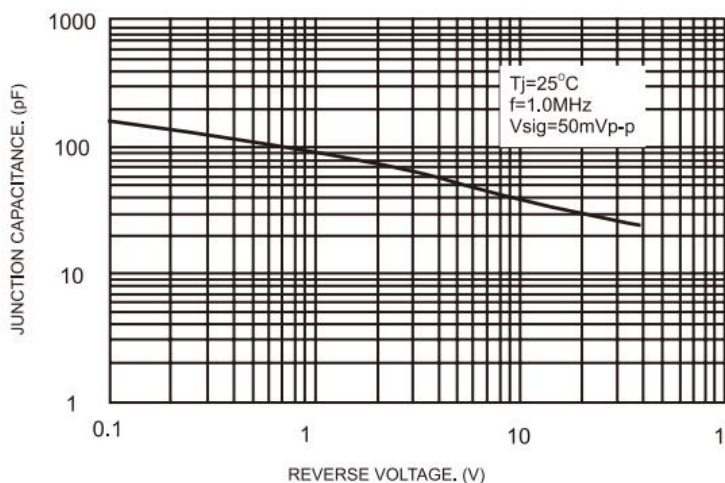


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

