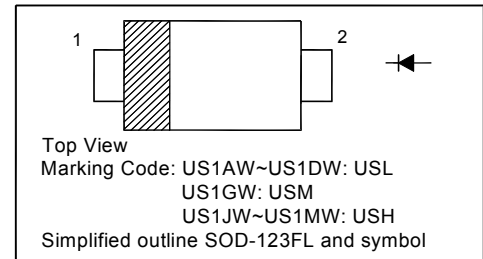


US1AW THRU US1MW

Surface Mount Ultrafast Recovery Rectifier
Reverse Voltage - 50 to 1000 V
Forward Current - 1 A

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



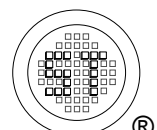
Maximum Ratings and Electrical characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	US1AW	US1BW	US1DW	US1GW	US1JW	US1KW	US1MW	Units
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
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.0		1.3		1.7		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	5 100							μA
Maximum Reverse Recovery Time ¹⁾	t_{rr}	50				75			ns
Typical Thermal Resistance	$R_{\theta JA}$	180							°C/W
Operating and Storage Temperature Range	T_J, T_{stg}	- 55 to + 150							°C

¹⁾ Measured with $I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A$



US1AW THRU US1MW

Electrical Characteristic Curves

Fig 1. Reverse Characteristics

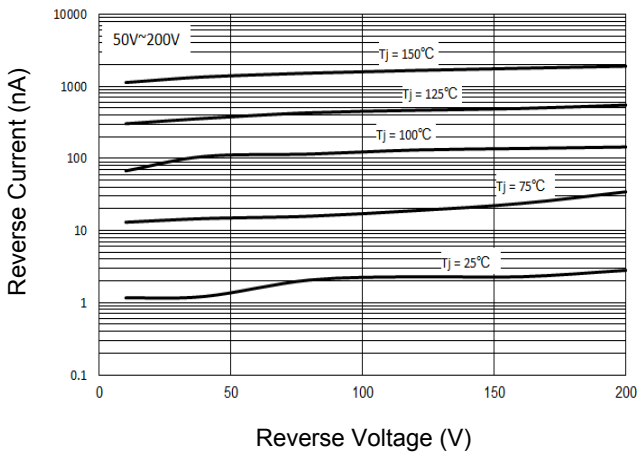


Fig 2. Reverse Characteristics

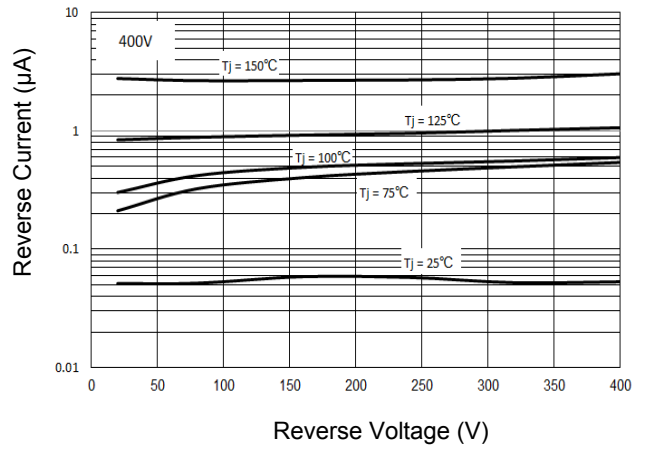


Fig 3. Reverse Characteristics

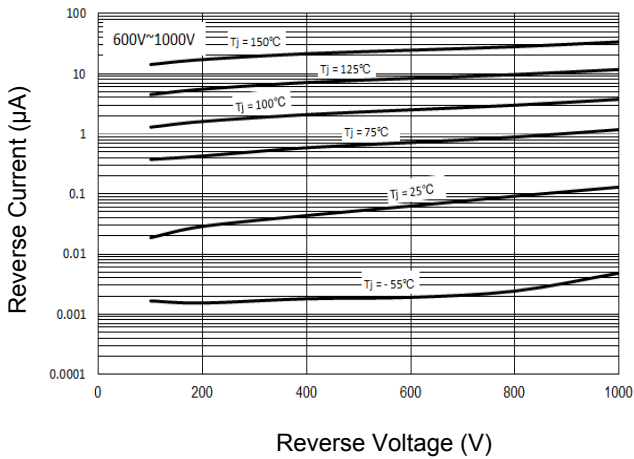


Fig 4. Forward Characteristics

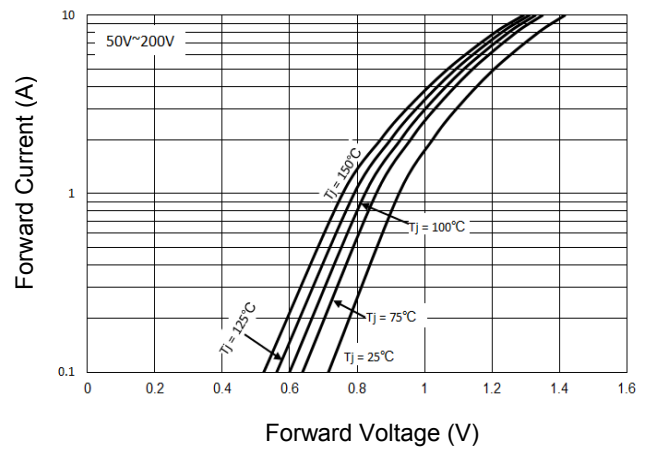


Fig 5. Forward Characteristics

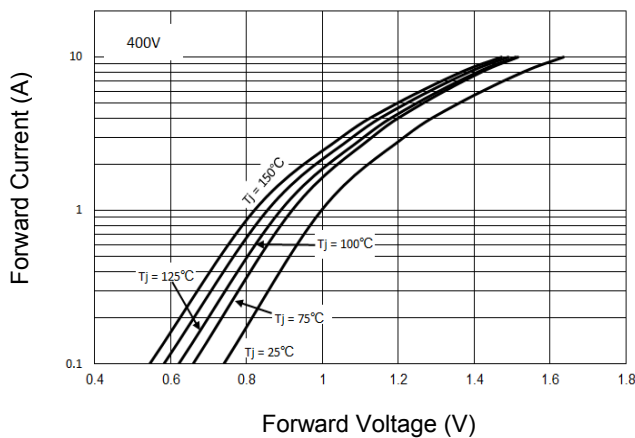
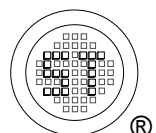
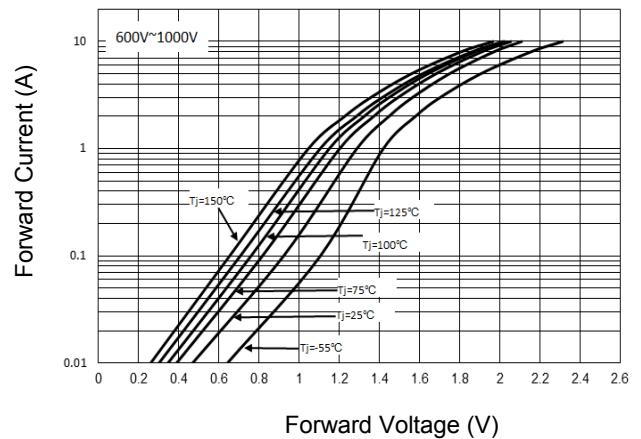


Fig 6. Forward Characteristics



US1AW THRU US1MW

Electrical Characteristic Curves

Fig 7. Junction Capacitance

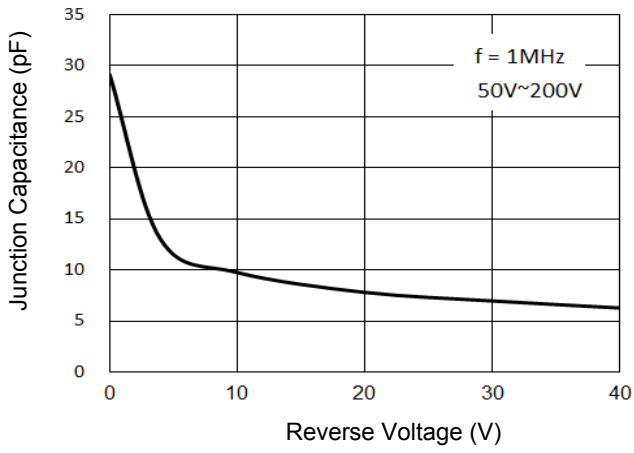


Fig 8. Junction Capacitance

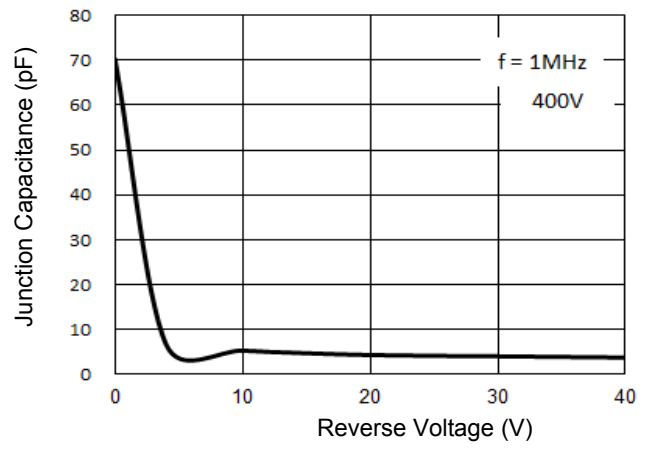
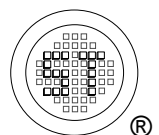
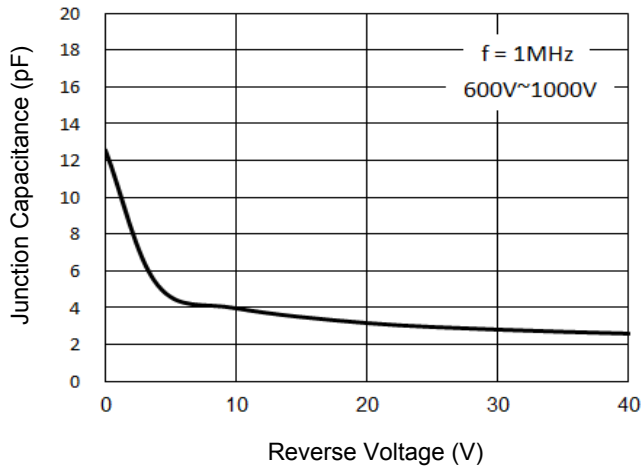


Fig 9. Junction Capacitance

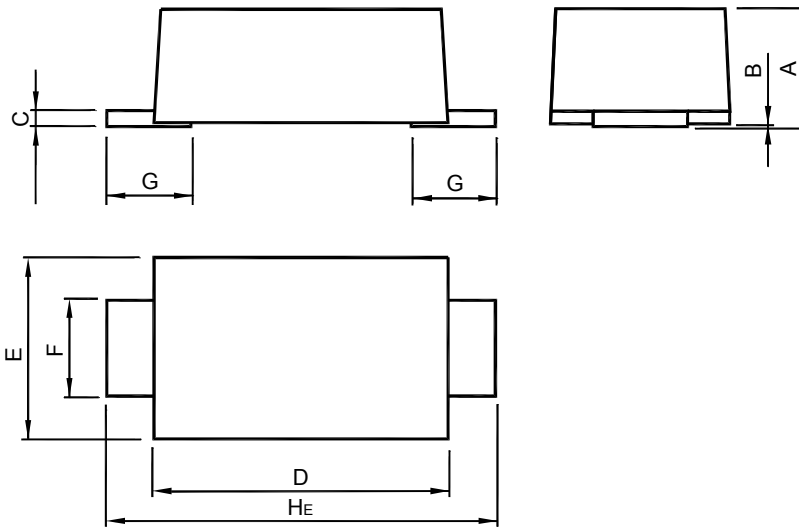


US1AW THRU US1MW

PACKAGE OUTLINE

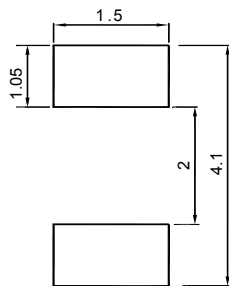
Plastic surface mounted package; 2 leads

SOD-123FL



UNIT	A	B	C	D	E	F	G	H _E
mm	1.08 0.88	0.1 0	0.2 0.1	2.9 2.7	1.9 1.7	1.1 0.8	0.85 0.45	3.9 3.5

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-123FL	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" III " = Cathode line

" *** " = Part No.

Font type: Arial

