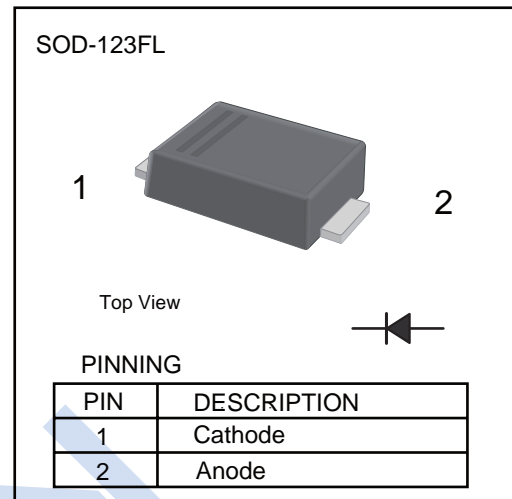


Ultrafast Recovery Rectifier

US1AFL ~ US1MFL

■ Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- High efficiency



■ Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

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

Parameter	Symbol	US1AFL	US1BFL	US1DFL	US1GFL	US1JFL	US1KFL	US1MFL	Unit	
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		
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000		
Instantaneous Forward Voltage at $I_F=1.0A$	V_F	1.0			1.3	1.65				
Maximum Average Forward Rectified Current @ $T_C = 125^\circ C$	$I_{F(AV)}$	1.0								A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load	I_{FSM}	30								
Maximum DC Reverse Current $T_A=25^\circ C$ at rated DC blocking voltage $T_A=125^\circ C$	I_R	5				100				μA
Reverse Recovery Time *1	t_{rr}	50				75				
Typical Junction Capacitance *2	C_j	15								pF
Typical Thermal Resistance *3	$R_{\theta JA}$	85								$^\circ C/W$
Junction Temperature	T_j	150								$^\circ C$
Storage Temperature	T_{stg}	-55 to 150								

* 1 Reverse recovery test condition: $I_F = 0.5 A$, $I_R = 1 A$, $I_{rr} = 0.25 A$

* 2 Measured at 1MHz and applied reverse voltage of 4V D.C

* 3 P.C.B. mounted with 2.0x2.0"(5.0x5.0cm) copper pad areas.

■ Marking

NO.	US1AFL	US1BFL	US1DFL	US1GFL	US1JFL	US1KFL	US1MFL
Marking	USL			USM	USH		

Ultrafast Recovery Rectifier

US1AFL ~ US1MFL

■ Typical Characteristics

Fig.1 Forward Current Derating Curve

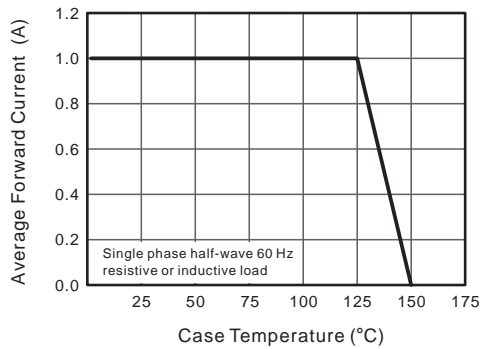


Fig.2 Typical Reverse Characteristics

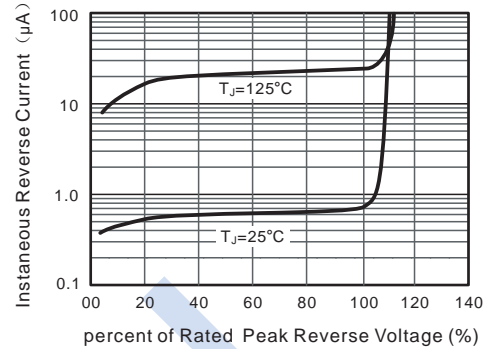


Fig.3 Typical Forward Characteristics

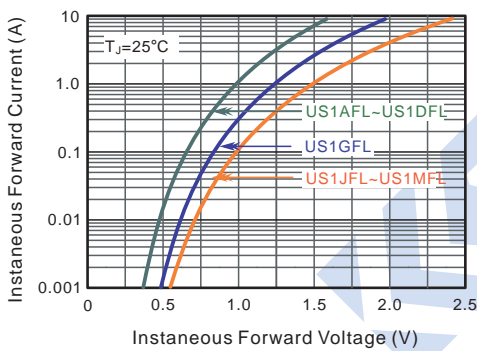


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

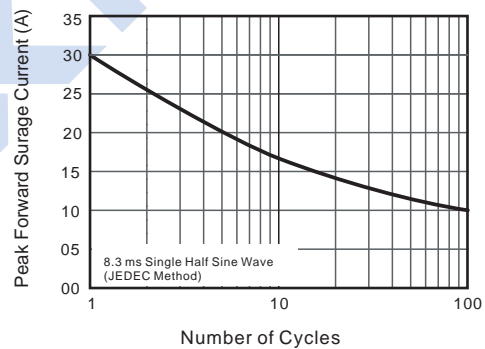


Fig.5- Typical Transient Thermal Impedance

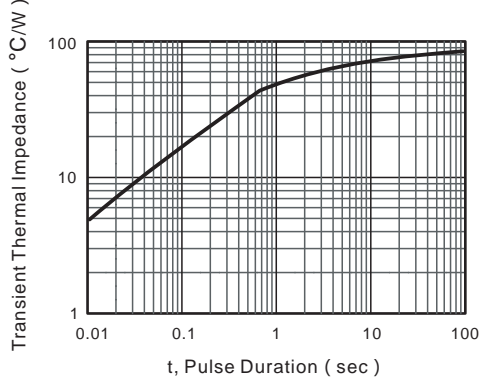
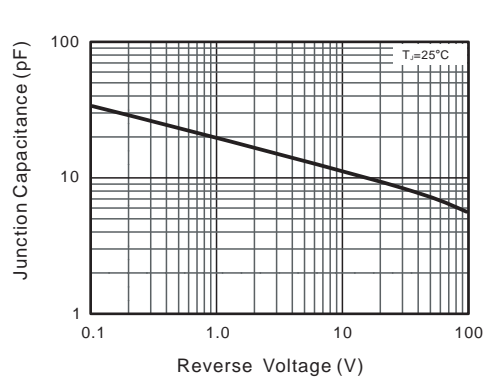


Fig.6 Typical Junction Capacitance



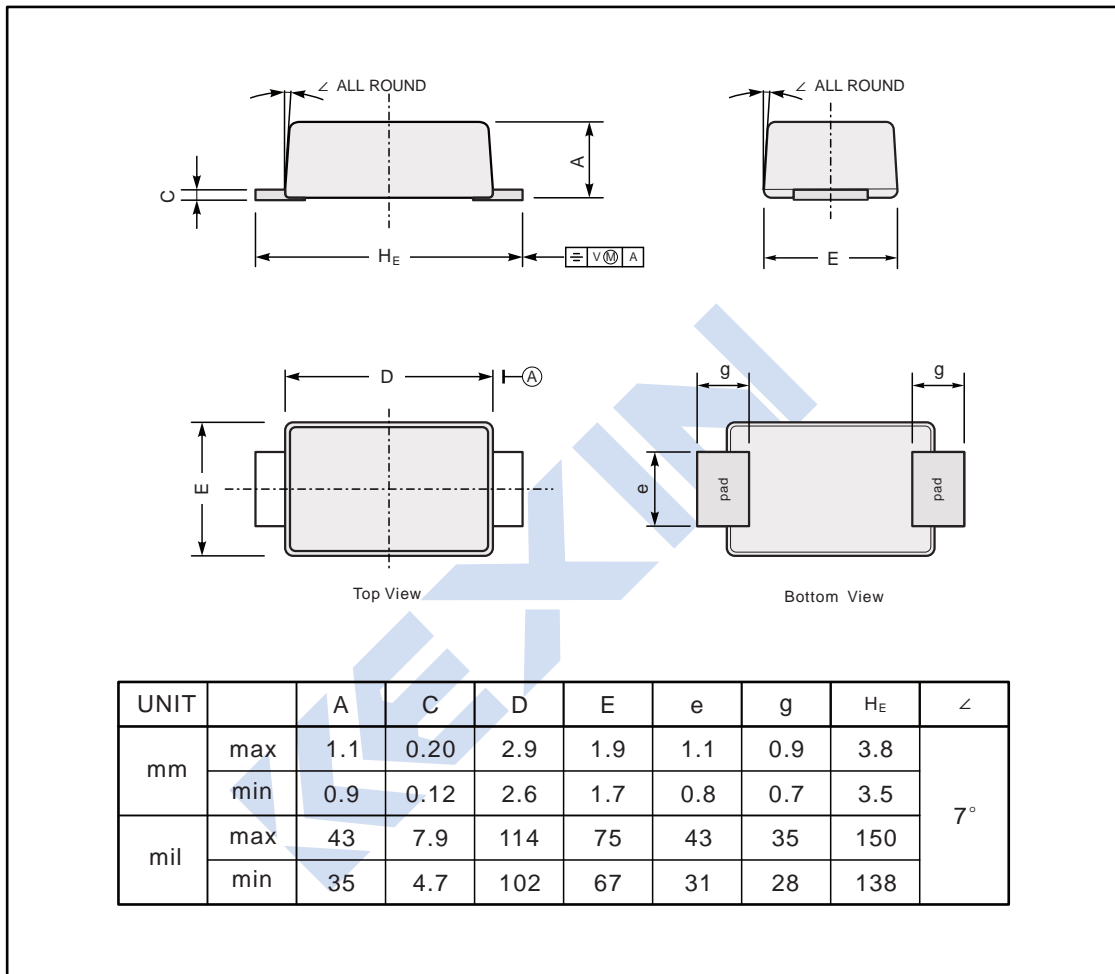
Ultrafast Recovery Rectifier

US1AFL ~ US1MFL

■ Package Outline Dimensions

Plastic surface mounted package; 2 leads

SOD-123FL



■ The Recommended Mounting Pad Size

