

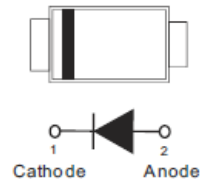
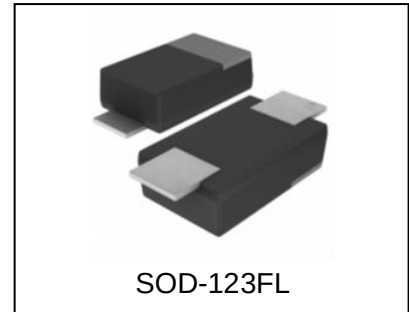


WES1xD1F

Surface Mount Superfast Recovery Rectifiers

vFeatures

- For surface mounted applications
- Low profile package
- Easy to pick and place
- Superfast reverse recovery time
- Reverse Voltage - 50 to 600 V
- Forward Current - 1 A
- RoHS Compliant & HF
- MSL: Level 1



Mechanical Characteristics

- Case: SOD-123FL, molded plastic body

Maximum Ratings and Electrical characteristics

Ratings at 25 ambient temperature unless otherwise specified.

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

Parameter	Symbol	WES1AD1F	WES1BD1F	WES1CD1F	WES1DD1F	WES1ED1F	WES1GD1F	WES1JD1F	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current	I _{F(AV)}	1							A
Peak forward surge current 8.3ms single half. Sine Wave Superimposed on Rated Load	I _{FSM}	30							A
Maximum instantaneous forward voltage at 1A	V _F	1				1.3		1.7	V
Maximum DC reverse current (Ta= 25℃) at rated DC blocking voltage (Ta=125℃)	I _R	5 100							μA
Typical Junction Capacitance at VR=4V, f=1MHz ⁽¹⁾	C _j	20							pF
Maximum Reverse Recovery Time ⁽²⁾	trr	35							ns

Typical Thermal Resistance	$R_{\theta JA}$	120	$^{\circ}\text{C}/\text{W}$
Operating and Storage temperature range	T_J, T_{stg}	-55 ~ +150	$^{\circ}\text{C}$

(1) Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C.

(2) Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$.

Electrical Characteristics Curves

Fig. 1 Forward Current Derating Curve

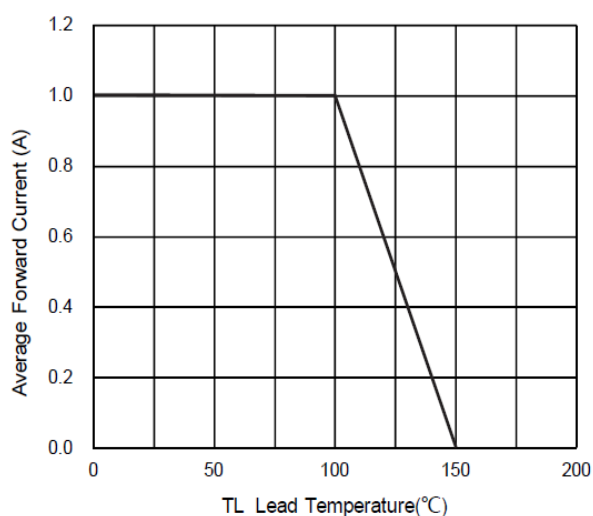


Fig. 2 Typical Forward Characteristics

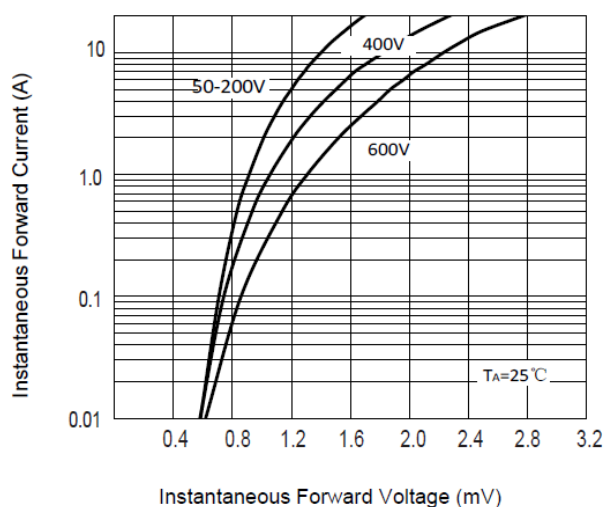


Fig. 3 Forward Surge Current Capability

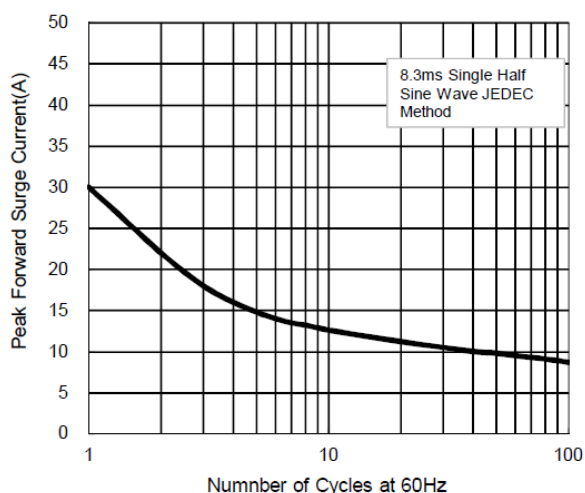
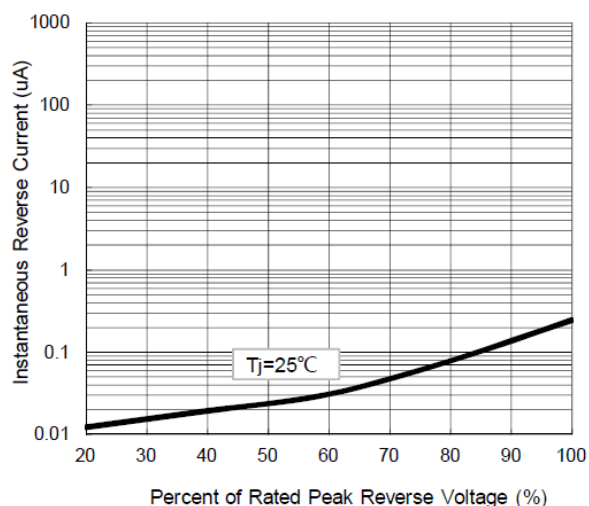


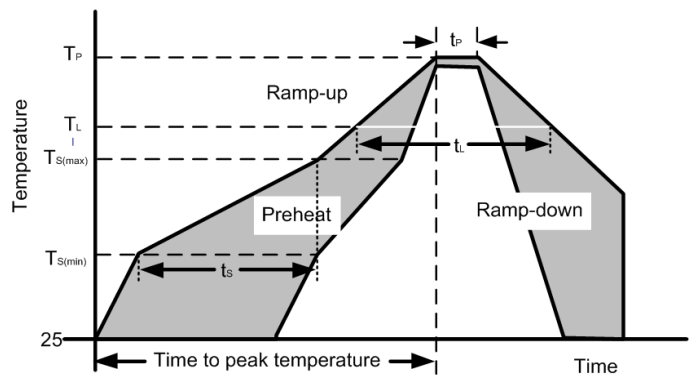
Fig. 4 Typical Reverse Characteristics



Note: The above typical parameters or typical characteristics are only indicative and do not make specific guarantees. If detailed values are required, additional communication and provision are required.

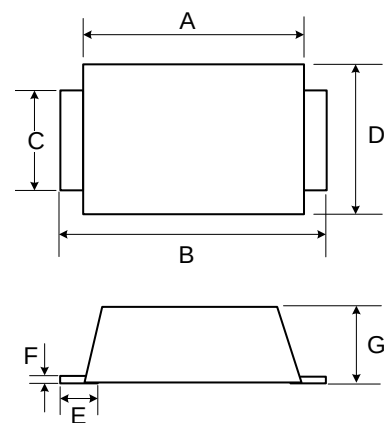
Soldering Parameters

Reflow Condition		
Pre Heat	Temperature Min ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60-190 s
Average ramp up rate (Liquidus Temp) (T_L) to peak		3°C/s max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/s max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Temperature (t_L)	60-150 s
Peak Temperature (T_P)		260 ^{+0/-5} °C
Time within actual peak Temperature (t_p)		20-40 s
Ramp-down Rate		5°C/s max
Time 25°C to peak Temperature (T_P)		8 minutes Max.
Do not exceed		260°C



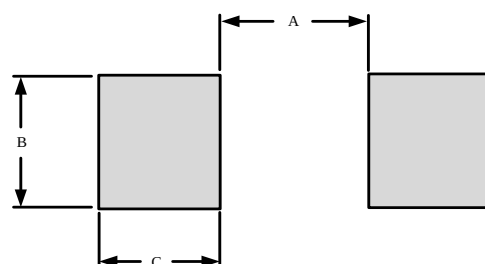
Outline Drawing

Ref. (mm)	Millimeters	
	Min.	Max.
A	2.40	2.95
B	3.40	3.95
C	0.70	1.20
D	1.50	2.00
E	0.35	0.95
F	0.05	0.26
G	0.90	1.40



Recommended Solder Pad Layout

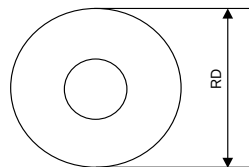
DIM(mm)	MILLIMETERS
A	1.6
B	1.4
C	1.3



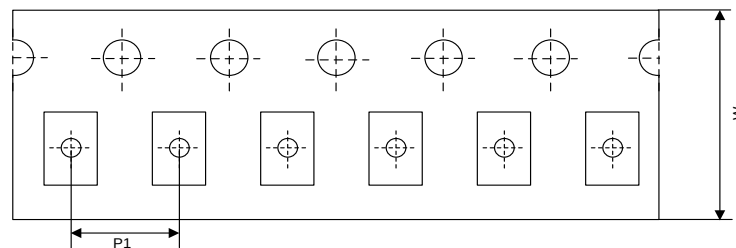
Tape and Reel Information

RD	Reel Dimensions	7 inch
W	Overall width of the carrier tape	8 mm
P1	Pitch between successive cavity centers	4 mm

Reel Dimensions Schematic diagram



Tape Dimensions Schematic diagram



Quadrant Assignments for PIN1 Orientation in tape

Marking

Part Number	WES1AD1F	WES1BD1F	WES1CD1F	WES1DD1F	WES1ED1F	WES1GD1F	WES1JD1F
Marking Code	ESL				ESM		ESH

Package Information

Package Type	Description	Quantity (pcs)
SOD-123FL	Tape & Reel Pack	3000

Contact Information

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For additional information, please contact your local Sales Representative.

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