

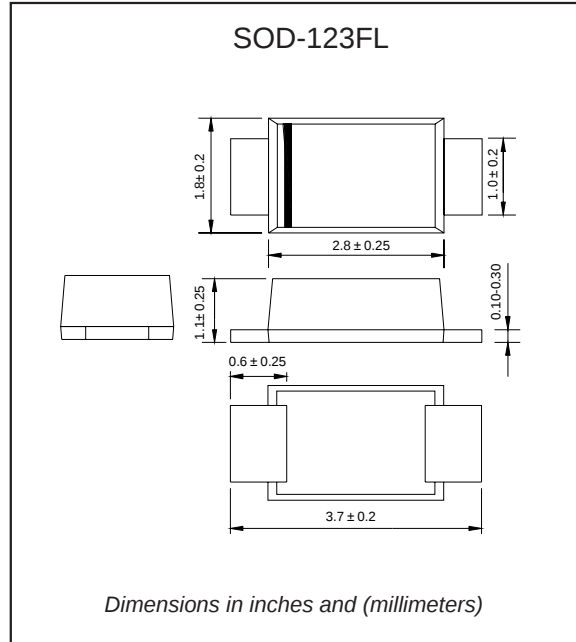
Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High forward surge current capability
- High temperature soldering guaranteed:
260°C/10 seconds
- Compliant to RoHS Directive 2011/65/EU
- Compliant to Halogen-free

Mechanical data

- **Case**: JEDEC SOD-123FL molded plastic body
- **Terminals**: Plated axial leads, solderable per MIL-STD-750, Method 2026
- **Polarity**: Color band denotes cathode end
- **Mounting Position**: Any

Package outline



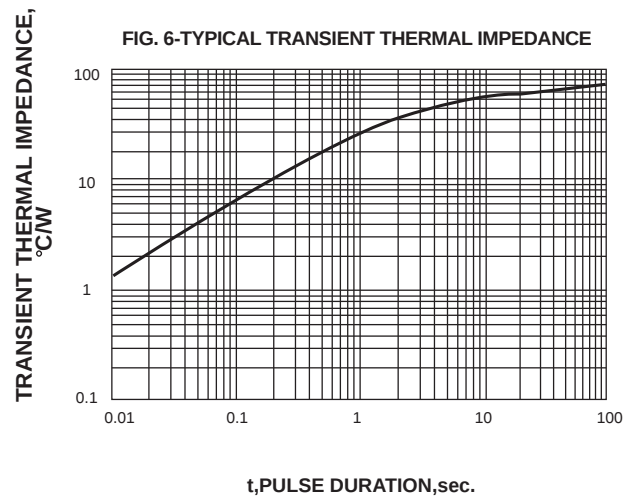
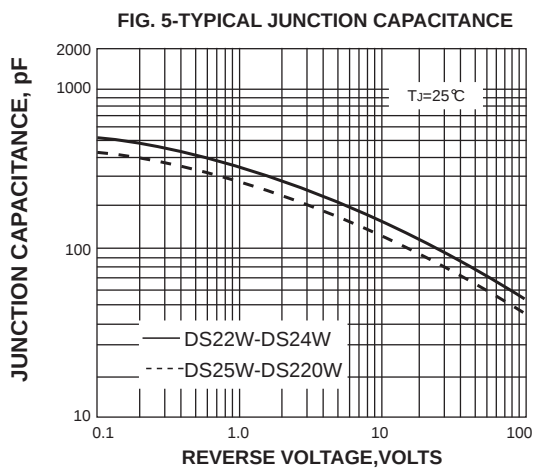
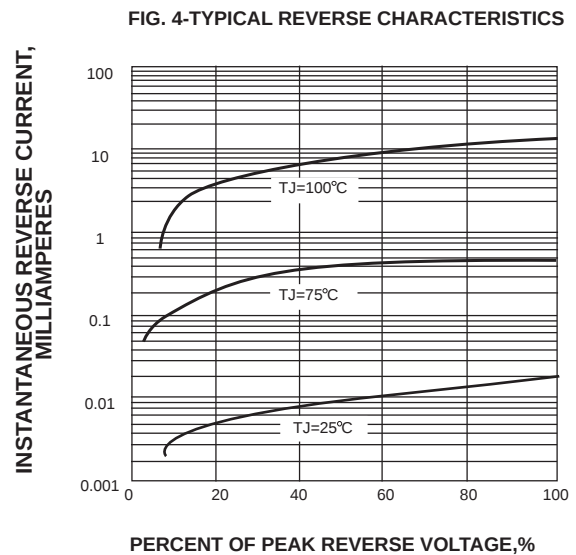
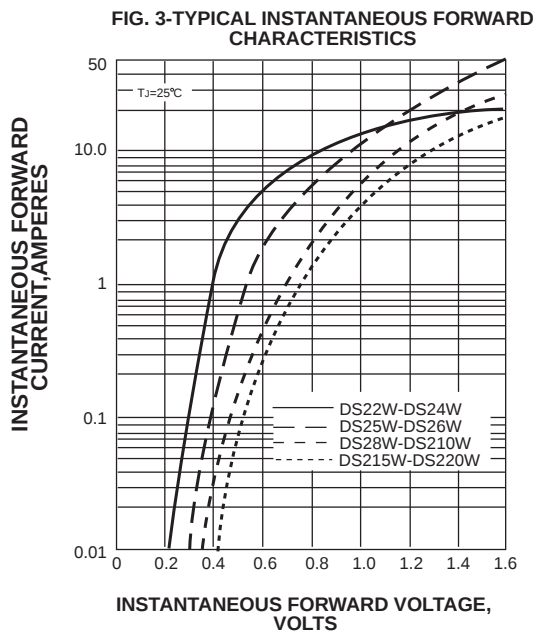
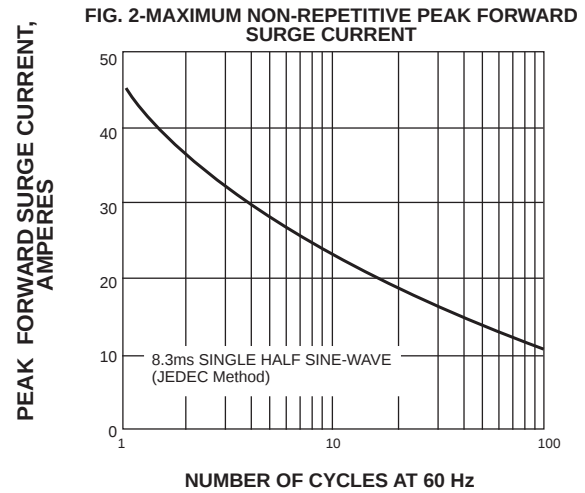
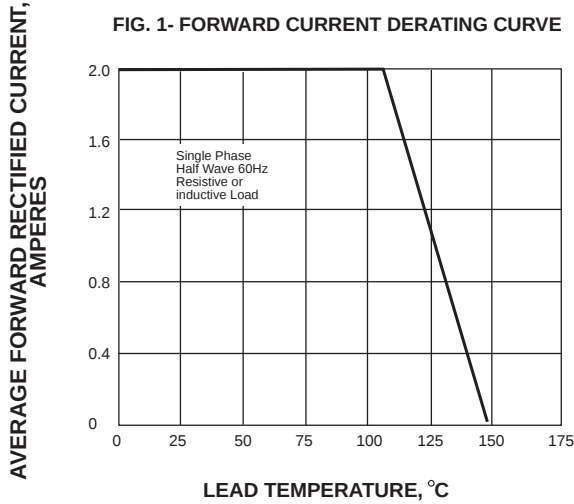
Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOLS	DS22W	DS23W	DS24W	DS25W	DS26W	DS28W	DS210W	DS215W	DS220W	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	80	100	150	200	V
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	80	100	150	200	V
Maximum average forward rectified current at T _L (see fig.1)	I _(AV)	2.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	45.0									A
Maximum instantaneous forward voltage at 2.0A	V _F	0.55			0.70		0.85		0.92		V
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	0.5					0.1			mA	
		10.0					5.0		2.0		
Typical junction capacitance (NOTE 1)	C _J	220									pF
Typical thermal resistance (NOTE 2)	R _{θJA}	85									°C/W
Operating junction temperature range	T _J	-55 to +150									°C
Storage temperature range	T _{STG}	-55 to +150									°C

Note:1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

Rating and characteristic curves



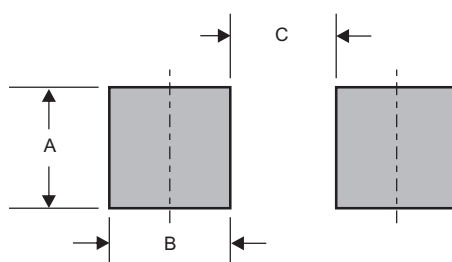
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
DS22W	K22
DS23W	K23
DS24W	K24
DS25W	K25
DS26W	K26
DS28W	K28
DS210W	K210
DS215W	K215
DS220W	S220

Suggested solder pad layout

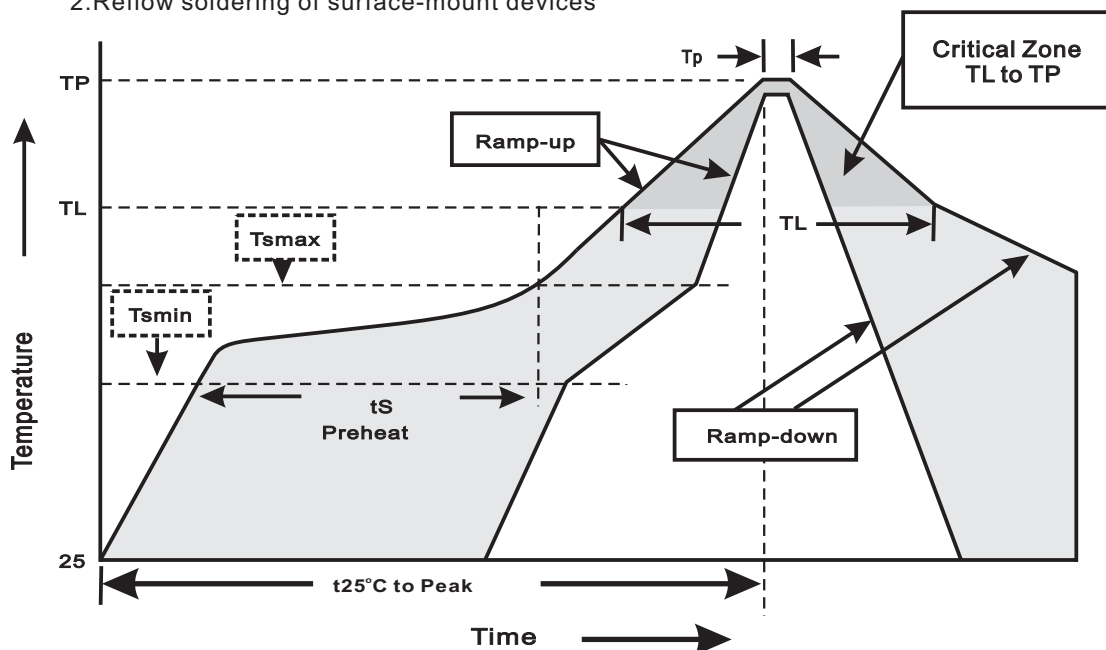


Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123FL	0.075 (1.90)	0.055 (1.40)	0.075 (1.90)

Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T _L to T _P)	<3°C/sec
Preheat -Temperature Min(T _{smin}) -Temperature Max(T _{smax}) -Time(min to max)(t _s)	150°C 200°C 60~120sec
T _{smax} to T _L -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(T _L) -Time(t _L)	217°C 60~260sec
Peak Temperature(T _P)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t _P)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes