

FEATURES

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance

MECHANICAL DATA

- * Case: Molded plastic
- * Lead: Axial leads, solderable per MIL-STD-750, method 2026
- * Polarity: Polarity symbols marked on case
- * Marking: T4



VOLTAGE RANGE
100.0 Volts
CURRENT
0.15 Ampere

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	1N4148WS	UNITS
Maximum Recurrent Peak Reverse Voltage	100	V
Maximum RMS Voltage	70	V
Maximum DC Blocking Voltage	100	V
Maximum Average Forward Rectified Current		
See Fig. 1	0.15	A
Peak Forward Surge Current @ t=1.0 μs	4.0	A
@ t=1.0s	1.0	A
Maximum Instantaneous Forward Voltage at 0.01A	0.85	
at 0.05A	1.0	
at 0.15A	1.25	V
Maximum DC Reverse Current at 75V Ta=25°C	1	μA
Typical Junction Capacitance (VR=0V f=1MHz)	1.15	pF
Total Power Dissipation	410	mW
Maximum Reverse Recovery Time (TRR)	4	ns
Typical Thermal Resistance R JA	625	°C/W
Operating Temperature Range Tj	-55 to +150	°C
Storage Temperature Range Tstg	-55 to +150	°C

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CHARACTERISTICS

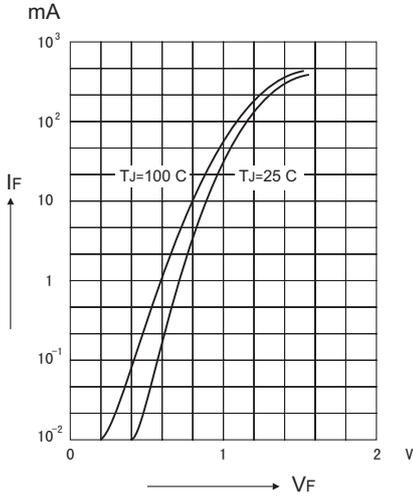


FIG 2: DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

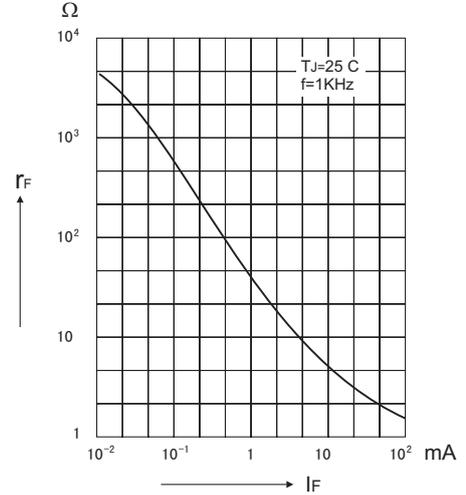


FIG 3: ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

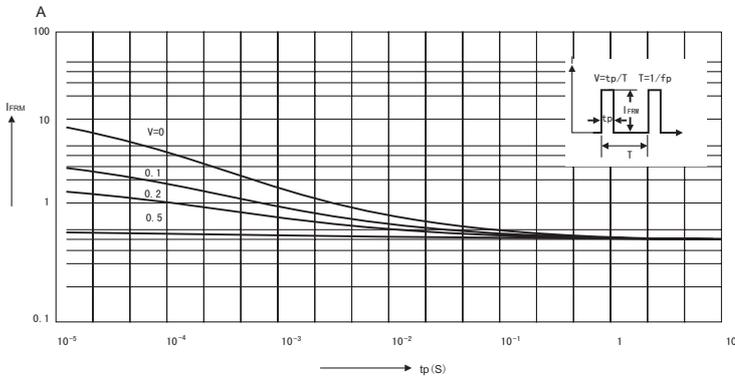
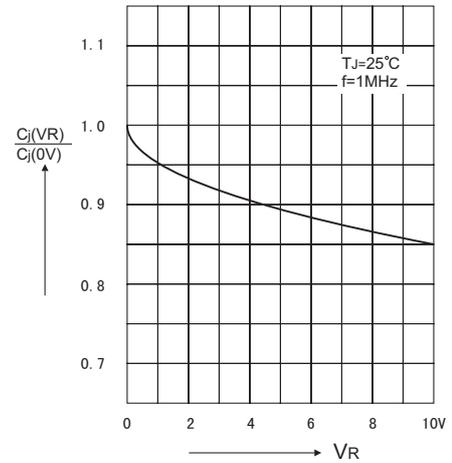
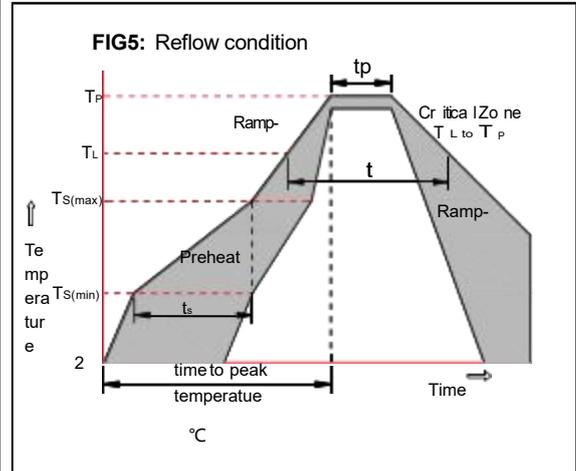


FIG. 4-RELATIVE CAPACITANCE VERSUS VOLTAGE



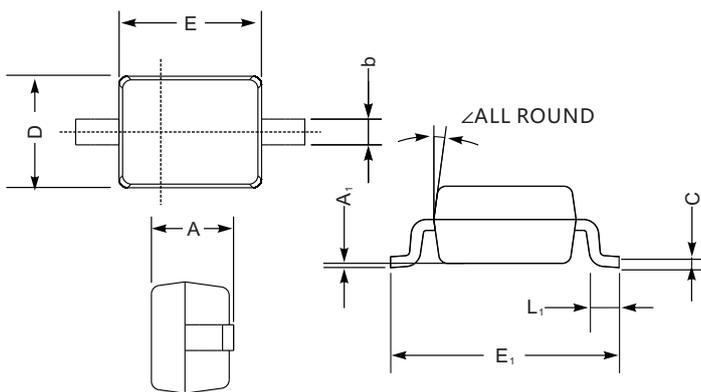
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max ($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature (T_L) (Liquid us)	+217°C
	-Temperature (t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C



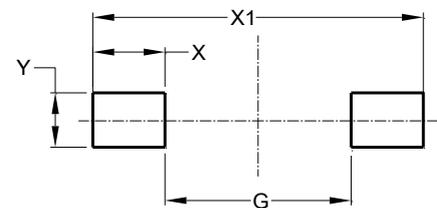
Package Dimensions & Suggested Pad Layout

SOD323



SOD-323 mechanical data

UNIT		A	C	D	E	E ₁	b	L ₁	A ₁	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	



Dimensions	Value (in mm)
G	1.40
X	1.20
X1	3.80
Y	1.00

Tape & reel specification

Tape		Symbol	Dimension (mm)		
<p>SECTION : A-A</p> <p>SECTION : B-B</p>		P0	4.00±0.20		
		P1	4.00±0.20		
		P2	2.00±0.20		
		D0	1.55±0.20		
		D1	1.00±0.20		
		E	1.55±0.25		
		F	3.60±0.20		
		W	8.00±0.20		
		A0	2.00±0.20		
		B0	3.25±0.20		
		K0	1.35±0.20		
		T	0.23±0.10		
		<p>7" Reel</p>		D2	177.0±5.0
				D3	55Min.
D4	R24.6±2.0				
G	R82.0±2.0				
I	13.0±2.0				
<p>Quantity: 3000PCS</p>		W1	10.20±3.0		