

# Preliminary Datasheet



## TS4148 0.3 AMPS High Speed Switching Diode

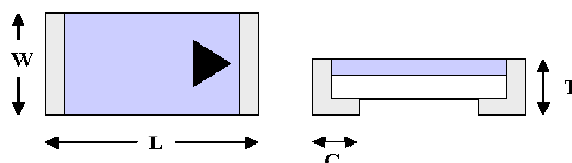
Voltage Range  
100 Volts  
Current  
0.3 Ampere

### Features

- ✧ For surface mounted application
- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ Fast switching for high efficiency
- ✧ High surge current capability
- ✧ Chip version in 1206 and 0805
- ✧ High temperature soldering:  
250°C / 10 seconds at terminals

### Mechanical Data

- ✧ Case: 1206 or 0805
- ✧ Terminals: Tin plated
- ✧ Polarity: Indicated by cathode arrow
- ✧ Packaging: 8 mm tape per EIA STD RS-481



Item	1206	0805
L	3.20 ± 0.20 (0.127 ± 0.008)	2.00 ± 0.20 (0.080 ± 0.008)
W	1.50 ± 0.20 (0.062 ± 0.008)	1.25 ± 0.20 (0.050 ± 0.008)
T	.085 ± 0.10 (0.034 ± 0.004)	.085 ± 0.10 (0.034 ± 0.004)
C	0.55 ± 0.20 (0.022 ± 0.008)	0.45 ± 0.20 (0.018 ± 0.008)

Dimensions in millimeters and (inches)

### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Type Number	Symbol	TS4148	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Reverse Voltage	$V_R$	75	V
Forward Current	$I_F$	300	mA
Maximum Average Forward Rectified Current Resistive Load $f > 50\text{Hz}$	$I_{F(AV)}$	150	mA
Peak Forward Surge Current, Half Sine-wave	$I_{FSM}$	500 2.0	mA A
Maximum Instantaneous Forward Voltage @ 10mA	$V_F$	1.0	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage	$I_R$	25.0 50.0	nA $\mu\text{A}$
Reverse Recovery Time ( Note 1)	$t_{rr}$	4.0	ns
Typical Junction Capacitance ( Note 2)	$C_J$	4.0	pF
Typical Thermal Resistance Junction to Ambient	$R_{THJ-A}$	75	°C/W
Power Dissipation	$P_D$	500	mW
Operating Temperature Range	$T_J$	-65 to +200	°C
Storage Temperature Range	$T_{STG}$	-65 to +200	°C

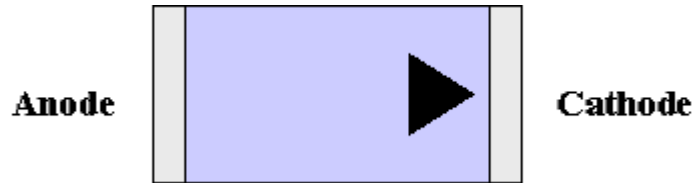
Notes: 1. Reverse Recovery Test Condition:  $I_F = 10\text{mA}$ ,  $V_R = 6\text{V}$ ,  $R_L = 100\ \Omega$   
2. Measured at 1 MHz and applied  $V_R = 4.0\text{V}$

Rev.1 06/2003

## Device Marking

Device has been marked indelibly and legibly

As follow



## Packing

<b>Package Name</b>	<b>TS4148 - 1206 - R7T4</b> <b>Type - Size - Packing</b>
<b>Packing</b>	<b>R7 7" (180mm) Reel 5,000 pcs/reel</b> <b>R13 13" (330mm) Reel 15,000 pcs/reel</b> <b>T4 4mm Pitch Paper Tape</b>

## Tape Specification

Item	Symbol	Dimension
Punch hole width 1206 0805	A	2.00 $\pm$ 0.10 (0.080 $\pm$ 0.004) 1.65 $\pm$ 0.10 (0.066 $\pm$ 0.004)
Punch hole length 1206 0805	B	3.60 $\pm$ 0.10 (0.144 $\pm$ 0.004) 2.40 $\pm$ 0.10 (0.096 $\pm$ 0.004)
Sprocket hole	D	1.50 $\pm$ 0.05 (0.060 $\pm$ 0.002)
Sprocket hole position	E	1.75 $\pm$ 0.10 (0.070 $\pm$ 0.004)
Punch hole position	F	3.50 $\pm$ 0.05 (0.140 $\pm$ 0.002)
Sprocket hole pitch	P0	4.00 $\pm$ 0.10 (0.160 $\pm$ 0.004)
Punch hole pitch	P1	4.00 $\pm$ 0.10 (0.160 $\pm$ 0.004)
Punch hole center	P2	2.00 $\pm$ 0.05 (0.080 $\pm$ 0.002)
Base tape width	W0	8.00 $\pm$ 0.20 (0.320 $\pm$ 0.008)
Top/Bottom seal tape width	W1	5.25 $\pm$ 0.05 (0.210 $\pm$ 0.002)
Base tape thickness	T0	0.95 $\pm$ 0.02 (0.038 $\pm$ 0.0008)
Top seal tape thickness	T1	0.054 $\pm$ 0.005 (0.002 $\pm$ 0.0002)
Bottom seal tape thickness	T2	0.042 $\pm$ 0.005 (0.0016 $\pm$ 0.0002)

