

Preliminary Datasheet



TS4148 0.3 AMPS High Speed Switching Diode

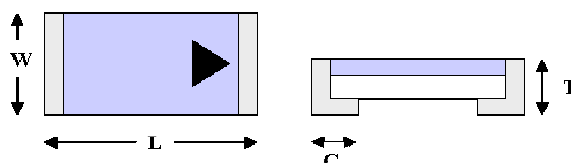
Voltage Range
100 Volts
Current
0.3 Ampere

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 μA
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

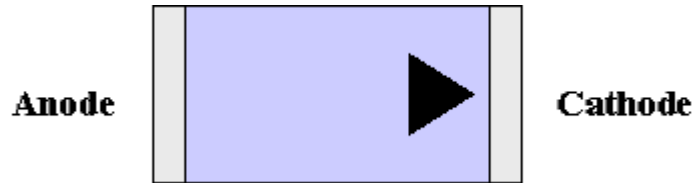
- Notes: 1. Reverse Recovery Test Condition: $I_F = 10\text{mA}$, $V_R = 6\text{V}$, $R_L = 100\ \Omega$
2. Measured at 1 MHz and applied $V_R = 4.0\text{V}$

Rev.1 06/2003

Device Marking

Device has been marked indelibly and legibly

As follow



Packing

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

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)

