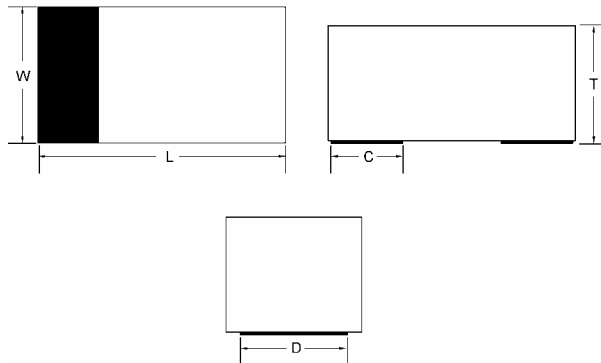


TS4148

0.35 AMPS High Speed Switching Diode

0603



Features

- ✧ For surface mounted application
- ✧ Low forward voltage drop
- ✧ High Current capability
- ✧ Fast switching for high efficiency
- ✧ High surge current capability
- ✧ Chip version in 0603
- ✧ High temperature soldering:
260°C / 10 seconds at terminals

Mechanical Data

- ✧ Cases: 0603
- ✧ Terminals: Gold plated, solderable per
MIL-STD-750, method 2026,
- ✧ Polarity: indicated by cathode band
- ✧ Package code: RZ
- ✧ Weight: 0.003 gram (approximately)

Item	0603
L	0.071(1.80) 0.063(1.60)
W	0.039(1.00) 0.031(0.80)
T	0.033(0.85) 0.027(0.70)
C	0.018(0.45) Typical
D	0.028(0.70) Typical

Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	0603	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Reverse Voltage	V_R	75	V
Maximum Average Forward Rectified Current Resistive Load $f > 50\text{Hz}$	$I_{F(AV)}$	150	mA
Peak Forward Surge Current 8.3 ms Half Sine-wave 1 μs	I_{FSM}	350 2.0	mA A
Maximum Instantaneous Forward Voltage @50mA	V_F	1.0	V
Maximum D.C. Reverse Current @ $T_c=25^\circ\text{C}$ $V_R=20\text{V}$ at Rated DC Blocking Voltage @ $T_c=125^\circ\text{C}$ $V_R=20\text{V}$	I_R	25 50	nA μA
Typical Reverse Recovery Time(Note 1) $T_J=25^\circ\text{C}$	T_{rr}	4.0	nS
Junction Capacitance (Note 2)	C_j	4.0	pF
Typical Thermal Resistance	$R_{\theta JA}$	660	$^\circ\text{C/W}$
Power Dissipation	P_D	150	mW
Operating Junction Temperature Range	T_J	-65 to + 125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to + 125	$^\circ\text{C}$

Notes: 1. Reverse Recovery Test Conditions: $I_F=I_R=10\text{mA}$, $R_L=100\text{ ohms}$, $I_{rr}=1\text{mA}$.
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (TS4148)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

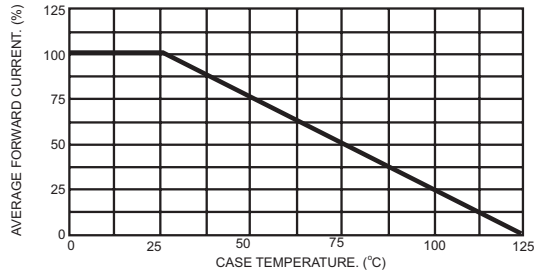


FIG.2- TYPICAL REVERSE CHARACTERISTICS

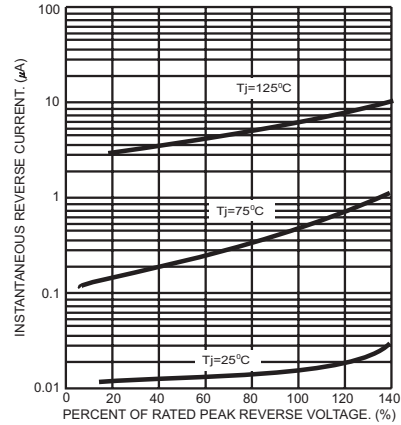


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

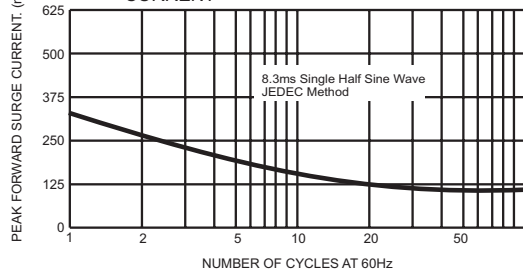


FIG.5- FORWARD CHARACTERISTIC CURVE

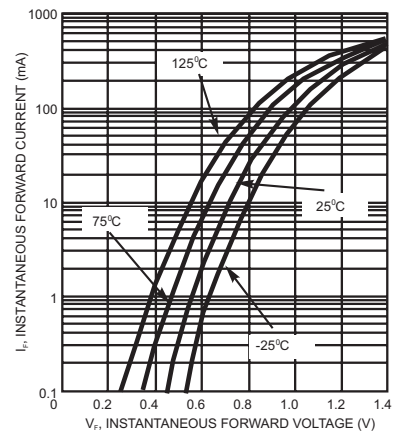


FIG.4- TYPICAL JUNCTION CAPACITANCE

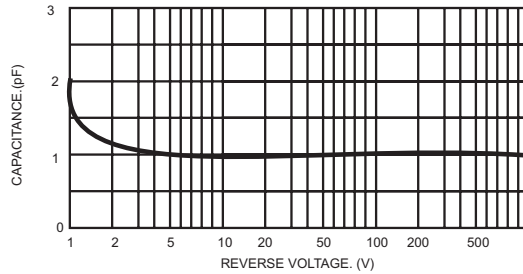


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

