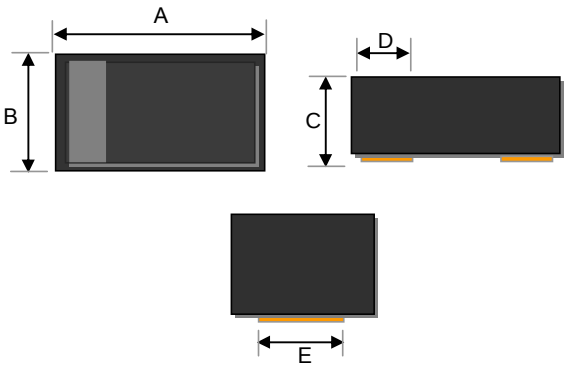
TAIWAN SEMICONDUCTOR

TS4148 RZG
150mW High Speed SMD Switching Diode

Small Signal Diode



0603



Features

- ✧Designed for mounting on small surface.
- ✧Extremely thin/leadless package
- ✧High mounting capability,strong surage with stand, high reliability.
- ✧Pb free version and RoHS compliant
- ✧Halogen free

Mechanical Data

- ✧Case :0603 standard package, molded plastic
- ✧Terminal: Gold plated, solderable per MIL-STD-750, method 2026 guaranteed
- ✧High temperature soldering guaranteed: 260°C/10s
- ✧Polarity : Indicated by cathode band
- ✧Weight : 0.003 gram (approximately)

Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.60	1.80	0.063	0.071
B	0.80	1.00	0.031	0.039
C	0.70	0.85	0.027	0.033
D	Typ.	0.45	Typ.	0.018
E	Typ.	0.70	Typ.	0.028

Ordering Information

Part No.	Package	Packing
TS4148 RZG	0603	4Kpcs / 7" Reel

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	Value	Units
Power Dissipation	P_D	150	mW
Non-Repetitive Peak Reverse Voltage	V_{RSM}	100	V
Repetitive Peak Reverse Voltage	V_{RRM}	75	V
Repetitive Peak Forward Current	I_{FRM}	300	mA
Mean Forward Current	I_O	150	mA
Non-Repetitive Peak Forward Surge Current Pulse Width= 1 µsec Pulse Width= 1 msec	I_{FSM}	 4.0 1.0	A
Thermal Resistance (Junction to Ambient) (Note 1)	RθJA	666	°C/W
Junction and Storage Temperature Range	T_J, T_{STG}	-40 to + 125	°C

Electrical Characteristics

Type Number			Symbol	Min	Max	Units
Reverse Breakdown Voltage		(Note 2)	$V_{(BR)}$	-	75	V
Forward Voltage	I_F=	50mA	V_F	-	1.00	V
Reverse Leakage Current	V_R=	20V	I_R	-	25	nA
	V_R=	75V		-	2.5	µA
Junction Capacitance	V_R=0, f=1.0MHz		C_J		4.0	pF
Reverse Recovery Time	(Note3)		Trr		4	ns

Notes:1. Valid provided that electrodes are kept at ambient temperature

Notes:2. Test Condition : I_R=100µA

Notes:3. Test Condition : I_F=I_R=30mA, R_L=100Ω, I_{RR}=3mA

Small Signal Diode

Rating and Sharacteristic Curves

FIG 1 Typical Forward Characteristics

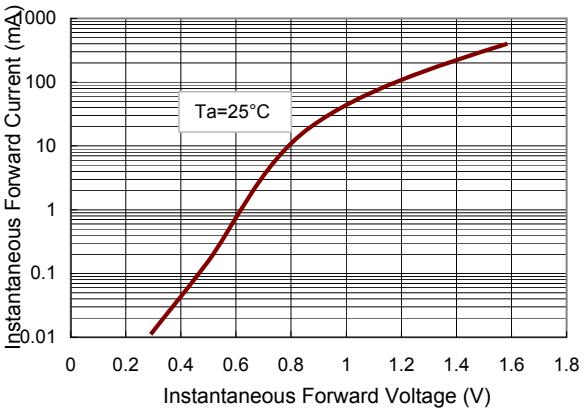


FIG 2 Reverse Current vs Reverse Voltage

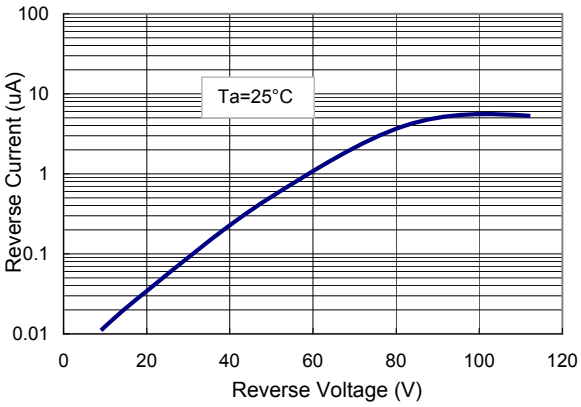


FIG 3 Admissible Power Dissipation Curve

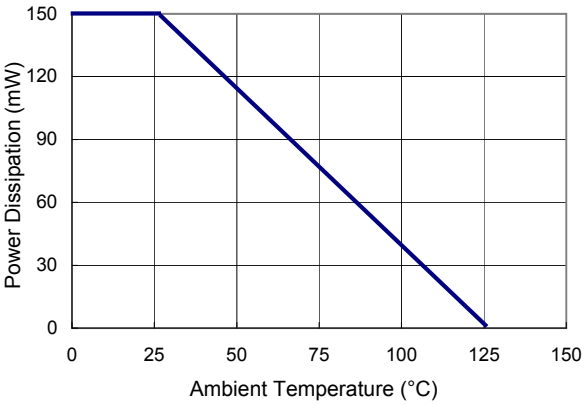


FIG 4 Typical Junction Capacitance

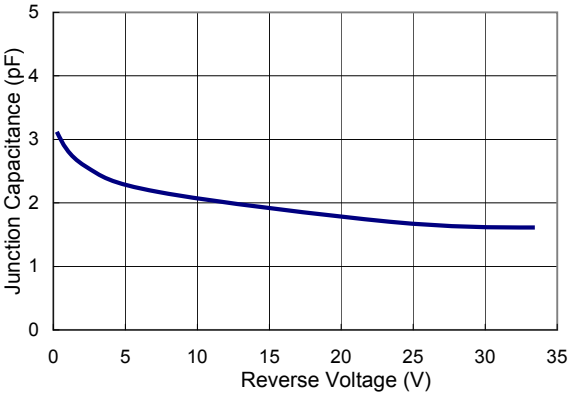


FIG 5 Forward Resistance vs. Forward Current

