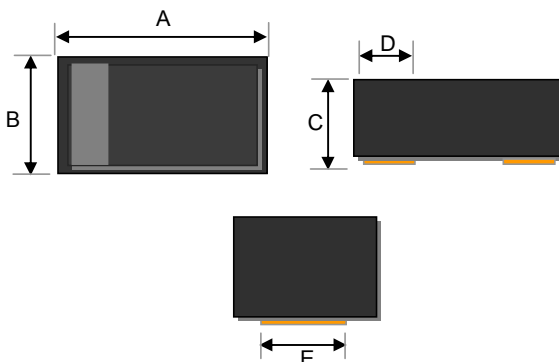


Small Signal Diode

1005

Features

- ✧ Designed for mounting on small surface.
- ✧ Extremely thin/leadless package
- ✧ High mounting capability, strong surge with stand, high reliability.
- ✧ Pb free version and RoHS compliant
- ✧ Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

Mechanical Data

- ✧ Case : 1005 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 : 0.006 gram (approximately)

Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.40	2.60	0.095	0.102
B	1.10	1.30	0.043	0.051
C	0.70	0.90	0.027	0.035
D	Typ.	0.50	Typ.	0.020
E	Typ.	1.00	Typ.	0.040

Ordering Information

Part No.	Package	Packing
TS4148 RW	1005	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	350	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	I_{FSM}	4.0	A
Pulse Width= 1 μ sec		1.0	
Pulse Width= 1 msec			
Thermal Resistance (Junction to Ambient) (Note 1)	$R_{\theta JA}$	500	°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
Junction Capacitance $V_R=0, f=1.0$ MHz	C_J		4.0	pF
Reverse Recovery Time (Note3)	T_{rr}		4	ns

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

 Notes:2. Test Condition : $I_R=100\mu A$

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

Small Signal Diode

Rating and Sharacteristic Curves

FIG 1 Typical Forward Characteristics

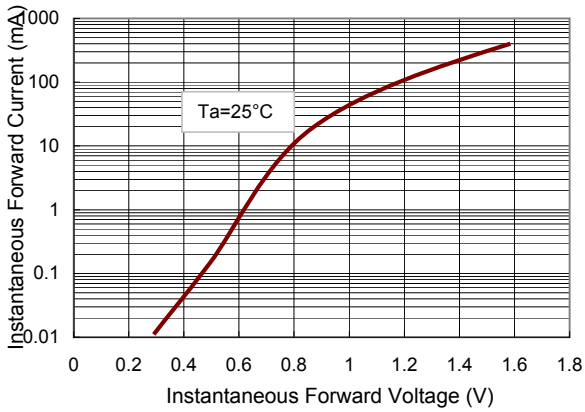


FIG 2 Reverse Current vs Reverse Voltage

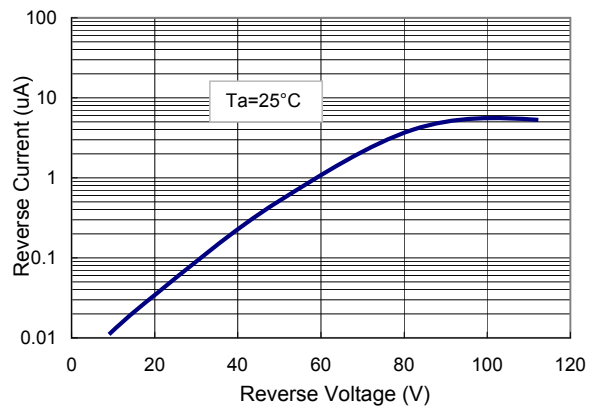


FIG 3 Admissible Power Dissipation Curve

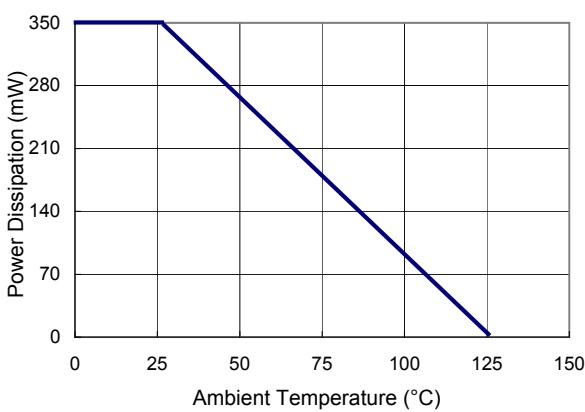


FIG 4 Typical Junction Capacitance

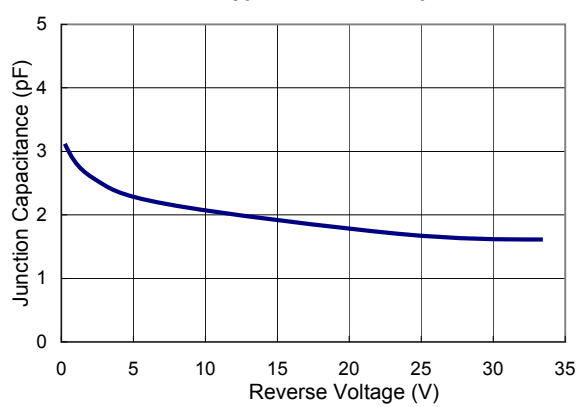


FIG 5 Forward Resistance vs. Forward Current

