

Voltage : 75V

Current: 0.15 Ampere

Part No: **CD4148WTP (0603)**

APPLICATION

Ultra high speed switching

FEATURE

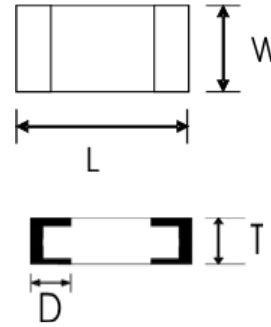
Small surface mounting type (0805)
 High speed. (TRR=4.0nSec Type)
 Suitable for high packing density.
 Maximum total power dissipation is 300mW.
 Peak forward current is 500mA.
 Withstand 260°C soldering temperature.
 ESD rating of class 3(>10KV)per human body model.

CONSTRUCTION

Silicon epitaxial planar

DIMENSION (mm)

CD4148WTP (0603)
 L: 1.65mm
 W: 0.90mm
 T: 0.75mm
 D: 0.45mm



CIRCUIT



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.

MAXIMUM RATING (At Ta = 25°C unless otherwise noted)

RATING	SYMBOL	CD4148WTP (0603)	UNITS
Maximum Non-Repetitive Peak Reverse Voltage	VRM	100	Volts
Maximum Repetitive Peak Reverse Voltage	VRRM	75	Volts
Maximum working Peak Reverse Voltage	VRWM		
Maximum DC Blocking Voltage	VDC		
Maximum RMS Voltage	VRMS	53	Volts
Maximum Average Forward Rectified Current	IO	0.15	Amps
Peak Forward Surge Current	IFSM	@1Sec	1.0
		@1.0uSec	2.0
Typical Junction Capacitance between terminal (Note 1)	CJ	4.0	pF
Maximum Reverse Recovery (Note 2)	TRR	4.0	nSec
Maximum Thermal Resistance	Rθ JA	350	°C/W
Maximum operating and storage temperature range.	TJ, TSTG	-65+150	°C

Package:

Part No	CD4148WTP (0603)
Reel:	5K Pcs
G.W.	0.16Kg
Box:	50K Pcs
Carton:	300K PCS
C/Size:	41x39x21cm
G.W.:	10.5 Kgs
Brand:	SINLOON

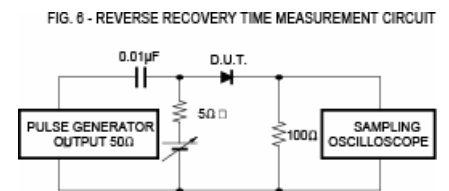
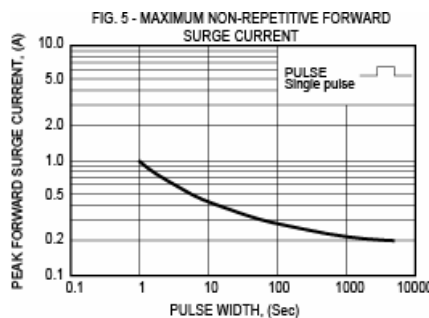
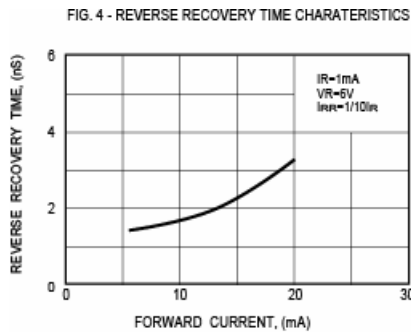
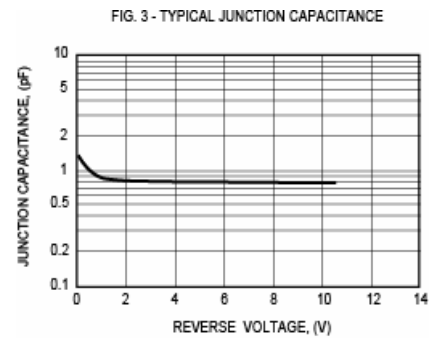
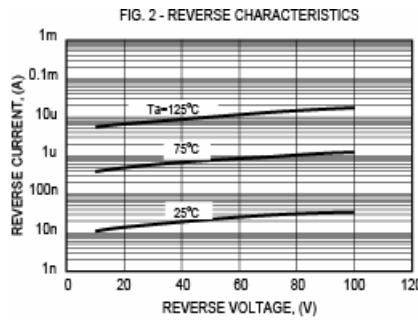
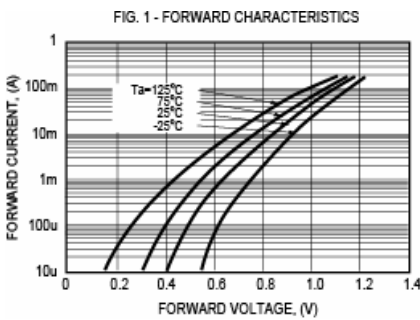


ELECTRICAL CHARACTERISTICS (At Ta = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	CD4148WTP (0603)	UNITS
Maximum Instantaneous Forward Voltage at = 1-mA	VF	1.0	Volts
Maximum Average Reverse Current	IR	VR= 20V @TJ=25°C	25
		VR= 75V @TJ=25°C	5.0
		VR= 20V @TJ=150°C	30
		VR= 70V @TJ=150°C	50

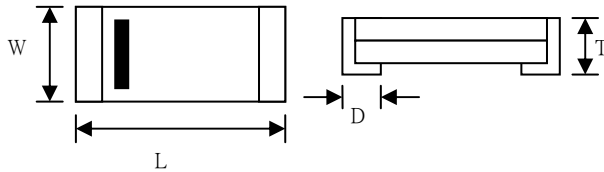
- NOTES 1 Measured at 1.0 MHz and allied reverse voltage of 0 voltage
 2 Measured at applied forward current of 10mA, reverse current of 1.0 mA, Reverse voltage of 6.0 voltage and RL = 100 ohms.
 3 ESD sensitive product handling required.

RATING CHARACTERISTICS CUVES



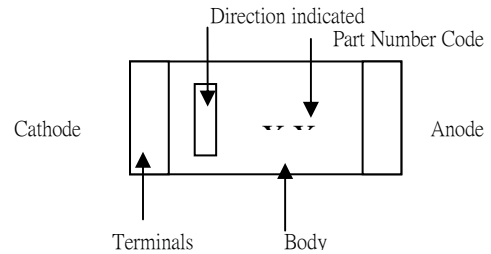
OUTLINE DIMENSION

Item	0603	0805	1206	SOD-123
L	1.55±0.1 (0.062±0.004)	2.00±0.20 (0.080±0.008)	3.2±0.20 (0.127±0.008)	3.50±0.10 (0.140±0.002)
W	0.8±0.10 (0.032±0.004)	1.25±0.20 (0.062±0.004)	1.50±0.20 (0.059±0.008)	1.50±0.10 (0.059±0.004)
T	0.065±0.10 (0.026±0.004)	0.85±0.10 (0.034±0.004)	0.85±0.10 (0.034±0.004)	0.92±0.10 (0.036±0.004)
D	0.35±0.10 (0.014±0.004)	0.45±0.20 (0.018±0.008)	0.55±0.20 (0.022±0.008)	0.35±0.10 (0.0137±0.004)



DEVICE MARKING

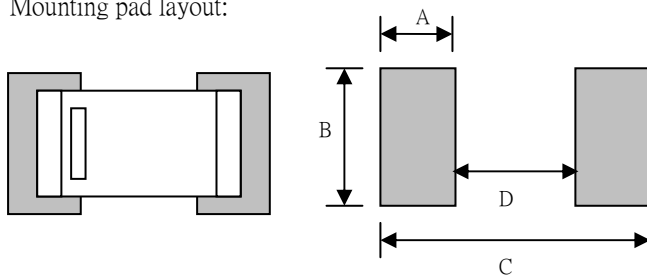
Device has been marked indelibly and legibly as follow



MOUNTING PAD

Unit : mm

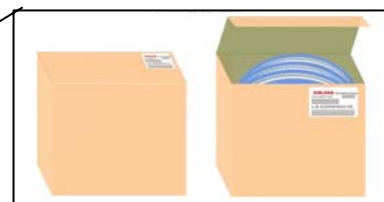
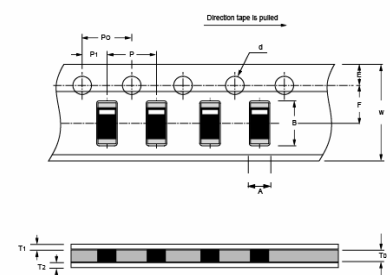
Mounting pad layout:



Layout	A	B	C	D
Size: 0805	1.2	1.2	3.3	0.9
Micro Melf	0.9	1.4	2.8	1.0
SOD-323	1.35	0.65	3.75	1.05
1206	1.2	1.7	4.1	1.7
Mini Melf	1.35	1.7	4.8	2.1
SOD-123	1.2	0.7	4.9	2.5

REEL TAPING SPECIFICATIONS

Item	Symbol	Specifications (mm)			
		Size: 0603	Size: 0805	Size: 1206	SOD-123
Carrier width	A	1.10±0.05	1.65±0.10	2.0±0.10	2.0±0.10
Carrier length	B	1.90±0.05	2.40±0.10	3.6±0.10	3.8±0.10
Sprocket hole	d	1.50±0.15	1.50±0.15	1.50±0.05	1.50±0.05
Sprocket hole position	E	1.75±0.10	1.75±0.10	1.75±0.1	1.75±0.1
Punch hole position	F	3.50±0.05	3.50±0.05	3.5±0.05	3.5±0.05
Punch hole pitch	P	4.00±0.10	4.00±0.10	4.0±0.10	4.0±0.10
Sprocket hole pitch	Po	4.00±0.10	4.00±0.10	4.0±0.10	4.0±0.10
Embossment centre	P1	2.0±0.05	2.0±0.05	2.0±0.05	2.0±0.05
Base tape width	W	8.0±0.20	8.0±0.20	8.0±0.20	8.0±0.20
Top/Bottom seat tape width	W1	5.25±0.05	5.25±0.05	5.25±0.05	5.25±0.05
Base tape thickness	T0	0.95±0.02	0.95±0.02	0.95±0.02	1.05±0.02
Top seat tape thickness	T1	0.054±0.005	0.054±0.005	0.054±0.005	0.054±0.005
Bottom seat tape thickness	T2	0.042±0.005	0.042±0.005	0.042±0.005	0.042±0.005



Small Signal - Chip Switching Diode

Part No.	Peak Repetitive Reverse Voltage V _{RRM} (V)	Max. Average Rectified Current I _o (mA)	Peak Forward Surge Current I _{FSM} (A)	Forward Voltage Drop V _F (A)	Max Reverse Current I _R (uA)	Power Rating (mW)	Reverse Recovery T _{RR} (nSec)	Capacitance C _{tot} (pF)
1 CD4148WTP (0603)	75	150	0.2	1.0	5.0	300	4.0	4.0
2 CD4148WSP (0805)	75	150	0.2	1.0	5.0	300	4.0	4.0
3 CD4148WP (1206)	75	150	0.2	1.0	5.0	300	4.0	4.0
4 CD4151WP (1206)	50	150	0.2	1.0	5.0	500	4.0	2.0
5 CD4448WP (1206)	75	150	0.2	1.0	5.0	300	4.0	4.0
6 HSD4148 SOD-123	75	150	0.2	1.0	5.0	300	4.0	3.0
7 HSD4151 SOD-123	50	150	0.2	1.0	50 nAmps	500	4.0	2.0
8 HSD4448 SOD-123	75	150	0.2	1.0	5.0	300	4.0	3.0
9 BASM16 SOD-123	100	150	0.2	1.0	1.0 (V _R =75V)	350	4.0	1.5
10 MAVM70 SOD-123	75	150	0.2	1.0	2.5 (V _R =75V)	300	4.0	1.5