



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**CD4148W  
CD4148WS  
CD4148WT**

**TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SWITCHING DIODE**

**VOLTAGE - 100 Volts**

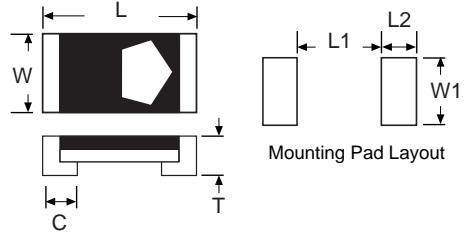
**CURRENT - 0.3 Ampere**

**FEATURES**

- \* Low power loss, high efficiency
- \* Low leakage
- \* Low forward voltage drop
- \* High speed switching
- \* High current capability
- \* High reliability

**MECHANICAL DATA**

- \* Case: 1206 / 0805 / 0603
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-202E, Method 208 guaranteed
- \* Mounting position: Any



ITEM	0603C	0805C	1206C
L	.065(1.65) .057(1.45)	.086(2.20) .071(1.80)	.134(3.40) .118(3.00)
W	.035(0.90) .027(0.70)	.057(1.45) .041(1.05)	.067(1.70) .051(1.30)
C	.018(.45) .010(.25)	.026(.65) .010(.25)	.030(.75) .014(.35)
T	.029(.75) .022(.55)	.037(.95) .029(.75)	.037(.95) .029(.75)
L1	.034(.86)	.048(1.22)	.085(2.16)
L2	.020(.51)	.020(.51)	.025(.64)
W1	.039(.99)	.055(1.40)	.067(1.70)
Weight (mg)	4	6	10

Dimensions in inches(millimeters)

**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%.

	SYMBOL	CD4148WT (0603C)	CD4148WS (0805C)	CD4148W (1206C)	UNITS
Maximum Reverse Voltage	V <sub>R</sub>	75			V
Maximum Non-Reprtitive Peak Reverse Voltage	V <sub>RM</sub>	100			V
Maximum Average Rectified Current	I <sub>F</sub>	150			mA
Peak Forward Surge Current @T=1μs	I <sub>FSM</sub>	500			mA
Maximum Power Dissipation @TA=25°C	P <sub>tot</sub>	500			mW
Maximum Forward Voltage	V <sub>F</sub>	1.0			V
Maximum Reverse Current	V <sub>R</sub> =20V	25			nA
	V <sub>R</sub> =75V	5.0			μA
Maximum Reverse Recovery Time(Note 1)	t <sub>rr</sub>	4.0			ns
Typical Junction Capacitance(Note 2)	C <sub>J</sub>	4.0			pF
Typical Thermal Resistance	R <sub>θJA</sub>	650		450	K/W
Operating and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-65 to +175			°C

Note: 1. Test conditions: I<sub>F</sub>=I<sub>R</sub>=10mA, R<sub>L</sub>=100Ω, measured at I<sub>R</sub>=1mA  
2. Measured at 1MHz and V<sub>R</sub>=0

# RATING AND CHARACTERISTIC CURVES (CD4148W AND CD4148WT)

FIG. 1 - FORWARD CHARACTERISTICS

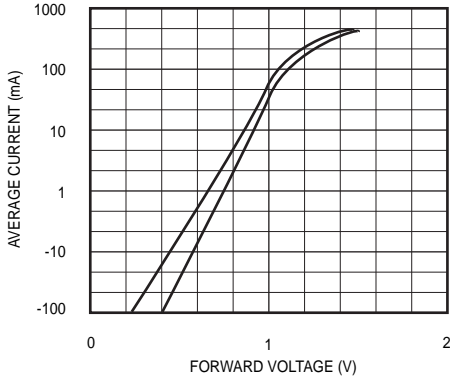


FIG. 2 - ADMISSIBLE POWER DISSIPATION vs. AMBIENT TEMPERATURE

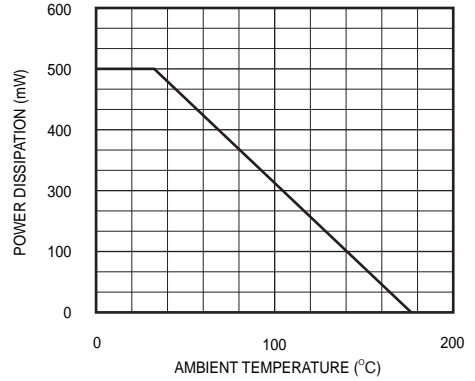


FIG. 3 - RELATIVE CAPACITANCE vs. REVERSE VOLTAGE

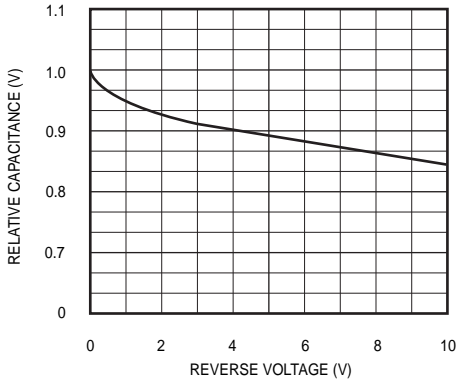
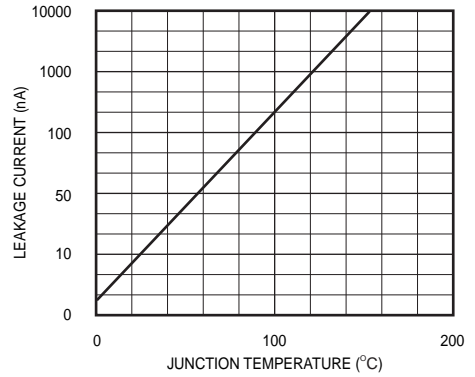


FIG. 4 - LEAKAGE CURRENT vs. JUNCTION TEMPERATURE



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