**CD4148WTP (0603)****75V 0.15A**

Small-Signal Chip Diode

Features

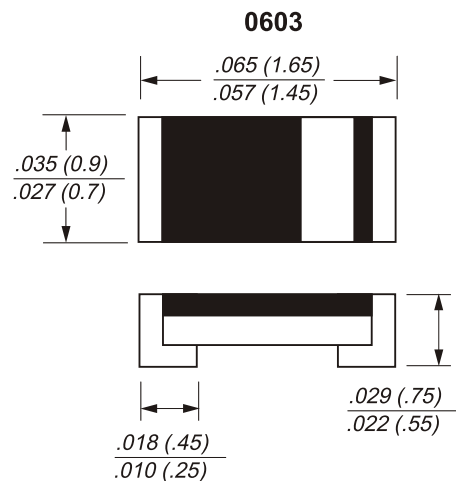
- This diode is also available in other case styles including the 1206 case with the type designation CD4148WP, the 0805 case with the type designation CD4148WSP
- Silicon Epitaxial Planar Diode
- Fast switching diode.

Mechanical Data

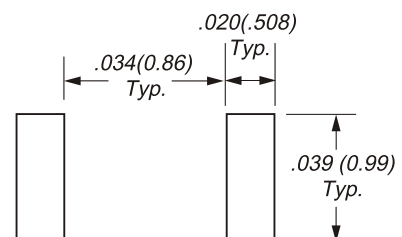
Case:0603

Weight : approx. 4 mg

Marking : Cathode band

*Dimensions in inches and (millimeters)*

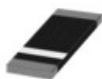
Mounting Pad Layout



Absolute Maximum Ratings & Thermal Characteristics $T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified

Parameter	Symbol	Value	Unit
Reverse voltage	V_R	75	V
Peak reverse voltage	V_{RM}	100	V
Forward continuous current	I_{FM}	300	mA
Average rectified current sin half wave rectification with resistive load $f \geq 50$ Hz	$I_{F(AV)}$	150 ¹⁾	mA
Surge forward current $t < 1$ s and $T_j = 25^{\circ}\text{C}$	I_{FSM}	500	mA
Power dissipation	P_{tot}	400 ¹⁾	mW
Typical Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	65 ¹⁾	K/W
Junction temperature	T_j	150	$^{\circ}\text{C}$
Storage temperature	T_S	- 65 to + 175	$^{\circ}\text{C}$

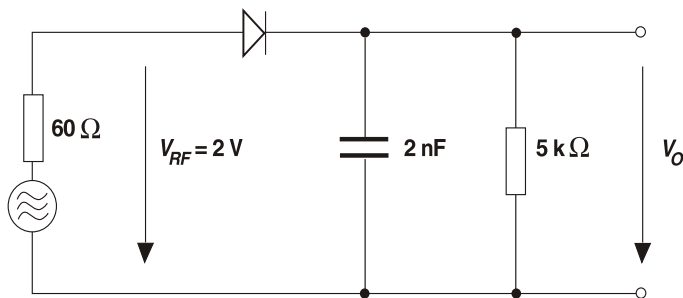
1) Valid provided that electrodes are kept at ambient temperature.



Electrical Characteristics $T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter		Symbol	Min	Max	Unit
Forward voltage	$I_F = 10\text{ mA}$	V_F		1.0	V
Leakage current	$V_R = 20\text{ V}$	I_R		25	nA
	$V_R = 75\text{ V}$			5.0	eA
	$V_R = 20\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$			50	eA
Capacitance	$V_F = V_R = 0\text{ V}$	C_{tot}		4	pF
Voltage rise when switching ON	tested with 50 mA pulses, $t_p = 0.1\text{ }\mu\text{s}$, rise time < 30 ns, $f_p = (5\text{ to }100)\text{ kHz}$	V_{fr}		2.5	V
Reverse recovery time	$I_F = 10\text{ mA}$ to $I_R = 1\text{ mA}$, $V_R = 6\text{ V}, R_L = 100\text{ }\Omega$	t_{rr}		4	ns
Rectification efficiency	$f = 100\text{ MHz}, V_{RF} = 2\text{ V}$		0.45		

Rectification Efficiency Measurement Circuit



Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

Figure 1. Forward Characteristics

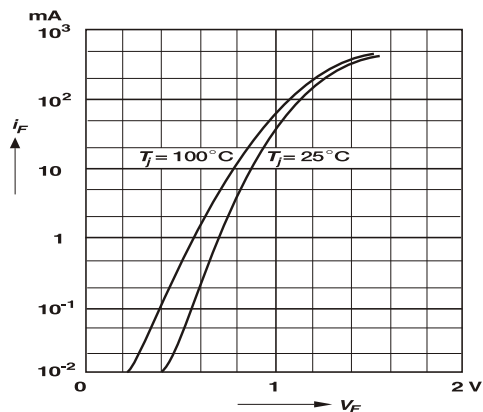
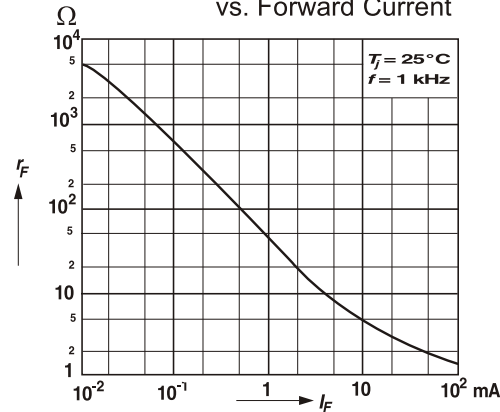


Figure 2. Dynamic Forward Resistance vs. Forward Current



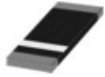


Figure 3. Admissible Power Dissipation vs. Ambient Temperature

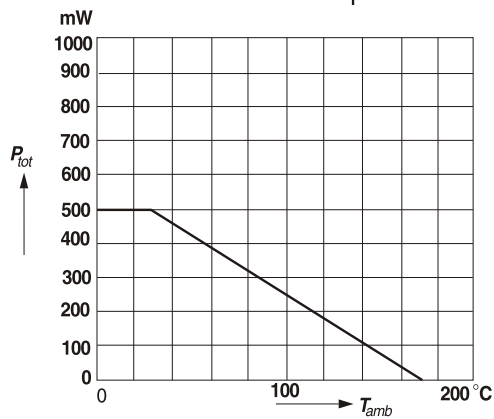


Figure 4. Relative Capacitance vs. Reverse Voltage

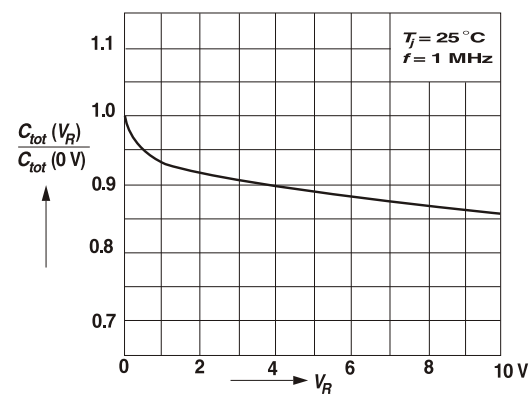


Figure 5. Leakage Current vs. Junction Temperature

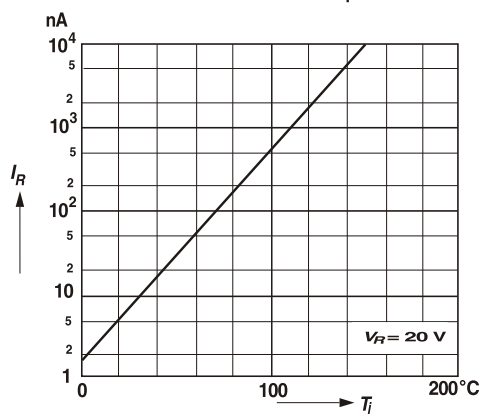
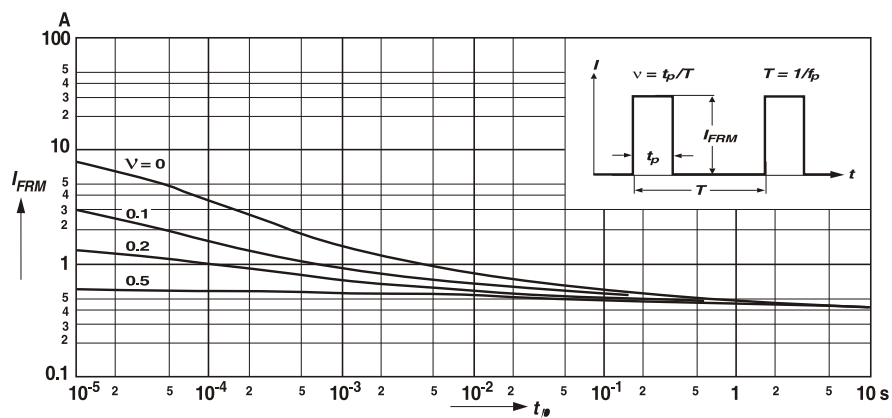
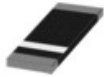


Figure 6. Admissible Repetitive Peak Forward Current vs. Pulse Duration





CD4148WTP (0603)
75V 0.15A

Device outlook

One plant front side



Two plant front side



One plant front side



Two plant front side



Tapping Reel

Item	Symbo	Size SPECIFICATIONS (mm)			
		0603	0805	1026	SOD-123
Carrier width	A	1.10±0.05	1.65±0.10	2.00±0.10	2.00±0.10
Carrier length	B	2.00±0.05	2.40±0.10	3.60±0.10	3.80±0.10
Sprocket hole	d	1.50±0.15	1.50±0.15	1.50±0.15	1.50±0.15
Project hole position	E	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10
Punch hole position	F	3.50±0.50	3.50±0.50	3.50±0.50	3.50±0.50
Punch hole pitch	P	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10
Sprocket hole pitch	Po	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10
Embossment centre	P1	2.00±0.05	2.00±0.05	2.00±0.05	2.00±0.05
Base tape width	W	8.00±0.20	8.00±0.20	8.00±0.20	8.00±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

Carton:

Size: 41x39x21cm

Quantity: 300K PCS

In Box: 50K PCS

G.W: 13 Kgs (WP)

10.5Kgs (WSP)

10.5Kgs (WTP)