



THE DATASHEET OF CD4148



- IN4148 AVAILABLE IN JANHC AND JANKC
- SWITCHING DIODE CHIPS
- ALL JUNCTIONS COMPLETELY PROTECTED WITH SILICON DIOXIDE
- COMPATIBLE WITH ALL WIRE BONDING AND DIE ATTACH TECHNIQUES WITH THE EXCEPTION OF SOLDER REFLOW

CD4148
 CD914
 CD3600
 CD4150
 CD4153
 CD4454

MAXIMUM RATINGS

Operating Temperature: -55°C to +175°C
 Storage Temperature: -65°C to +175°C

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified

TYPE	V _{BR} @100 μA	V _{RWM}	I _O	V _{F1} @I _F = 10mA	V _{F2} @I _F = 50mA	V _{F3} @I _F = 100mA	t _{rr}
	Volts (min)	Volts (pk)	mA	V _{dc}	V _{dc}	V _{dc}	n sec
CD914	100	75	75	0.8	1.2	N/A	5
CD4148	100	75	200	0.8	N/A	1.2	5
CD4454	75	50	200	1.0	N/A	N/A	4

TYPE	I _{R1} @20Vdc	I _{R2}	I _{R3} @20Vdc T _A +150°C	I _{R4} T _A +150°C	CAPACITANCE @0V	CAPACITANCE @1.5V
	nA	μA @ V	μA	μA @ V	pF	pF
CD914	25	0.5 @ 75	35	75 @ 75	4.0	2.8
CD4148	25	0.5 @ 75	35	75 @ 75	4.0	2.8
CD4454	N/A	0.1 @ 50	N/A	100 @ 50	2.0	N/A

TYPE	V _{BR} I _R = 10 μA*	V _{RWM}	I _{R1} V _R = 50 Vdc T _A = 25°C	I _{R2} V _R = 50 Vdc T _A = 150°C	C V _R = 0.1 = 1 Mhz; ac signals = 50mV (p-p)	t _{rr}
	VOLTS (MIN)	V (pk)	μA dc	μA dc	pF	ns
CD3600	75	50	0.10	100	2.5	4
CD4150	75	50	0.10	100	2.5	4
CD4153	75*	50	0.05	50	2.0	4

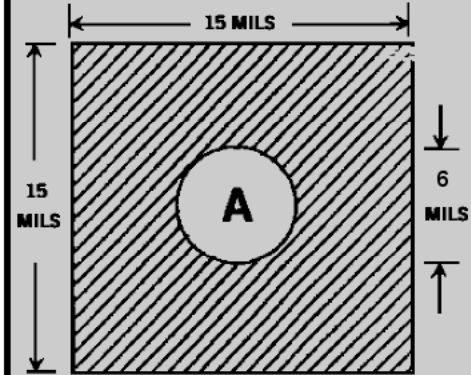
*@5 μA for CD4153

FORWARD VOLTAGE LIMITS - CD3600 and CD4150

LIMITS	V _{F1} I _F = 1mA dc	V _{F2} I _F = 10mA dc	V _{F3} I _F = 50mA dc (Pulsed)	V _{F4} I _F = 100mA dc (Pulsed)	V _{F5} I _F = 200mA dc (Pulsed)
	V dc	V dc	V dc	V dc	V dc
minimum	0.540	0.680	0.780	0.820	0.870
maximum	0.620	0.740	0.860	0.920	1.000

FORWARD VOLTAGE LIMITS - CD4153

LIMITS	V _{F1} I _F = 100 μA dc	V _{F2} I _F = 250 μA dc	V _{F3} I _F = 1 mA dc	V _{F4} I _F = 2 mA dc	V _{F5} I _F = 10 mA dc	V _{F6} I _F = 20 mA dc
	V dc	V dc	V dc	V dc	V dc	V dc
minimum	0.49	0.63	0.59	0.62	0.70	0.74
maximum	0.55	0.59	0.67	0.70	0.81	0.88



BACKSIDE IS CATHODE

FIGURE 1

DESIGN DATA

METALLIZATION:

Top: (Anode).....Al
 Back: (Cathode).....Au

AL THICKNESS25,000 Å Min

GOLD THICKNESS4,000 Å Min

CHIP THICKNESS10 Mils

TOLERANCES: ALL
 Dimensions ± 2 mils



CD4148, CD914, CD3600, CD4150, CD4153 and CD4454

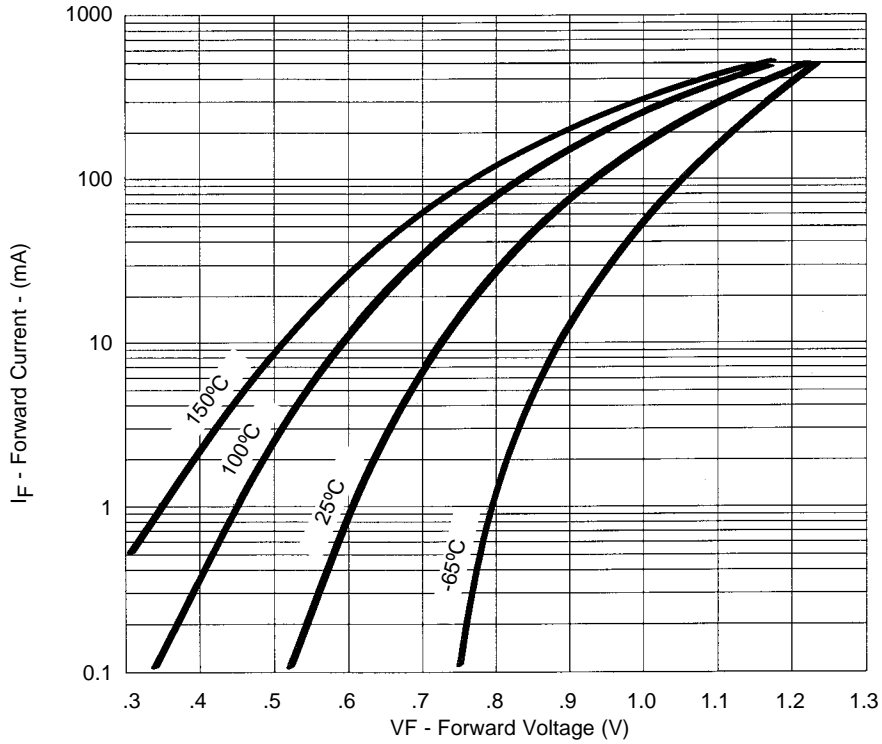
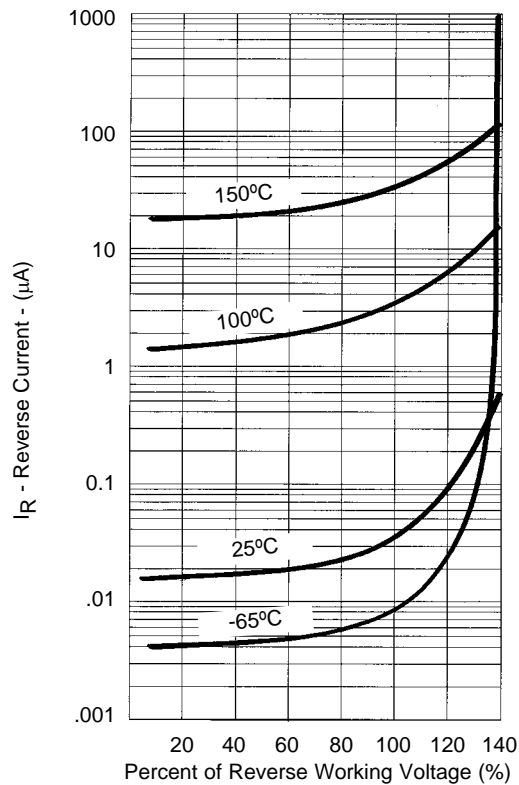


FIGURE 2
Typical Forward Current
vs Forward Voltage




NOTE : All temperatures shown on graphs are junction temperatures

FIGURE 3
Typical Reverse Current
vs Reverse Voltage

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