Silicon Switching Diode Chips

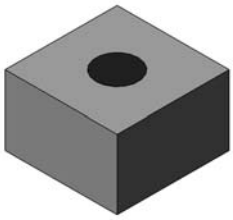
CD914, CD4148, CD4531, CD6642, CD3600, CD4150, CD6640, CD4153 & CD4454

CD914, CD4148 & CD4531 available in JANHC & JANKC per MIL-PRF-19500/116

CD4153 available in JANHC & JANKC per MIL-PRF-19500/133

Features

- All junctions completely protected with silicon dioxide.
- Compatible with all wire bonding and die attach techniques.



Maximum Ratings

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

Electrical Specifications @ +25 °C (Unless Otherwise Specified)

TYPE Number	V_{BR} @ 100 µA	V_{RWM}	I_O	V_{F1} I_F = 10 mA	V_{F2} I_F = 50 mA	V_{F3} I_F = 100 mA	T_{rr}	I_{R1} @ 20 Vdc	I_{R2}	I_{R3} @ 20 Vdc T_A =150°C	I_{R4} T_A =150°C	Capacitance @ 0V	Capacitance @1.5 V
	Volts (min)	Volts (pk)	mA	Vdc	Vdc	Vdc	nsec	nA	µA @ V	µA	µA @ V	pF	pF
CD914	100	75	75	0.8	1.2	N/A	5	25	0.5 @ 75	35	75 @ 75	4.0	2.8
CD4148 CD4531 CD6642	100	75	200	0.8	N/A	1.2	5	35	0.5 @ 75	35	75 @ 75	4.0	2.8
CD4454	75	50	200	1.0	N/A	N/A	4	N/A	0.1 @ 50	N/A	100 @ 50	2.0	N/A

TYPE Number	V_{BR} IR = 10 µA*	V_{RWM}	I_{R1} V_R = 50 Vdc T_A =150°C	I_{R2} V_R = 50 Vdc T_A =150°C	Capacitance V_R = 0; f = 1 MHz; ac signals = 50 mV (p-p)	T_{rr}
	Volts (min)	Volts (pk)	µA Vdc	µA Vdc	pF	nsec
CD3600	75	50	0.10	100	2.5	4
CD4150 CD6640	75	50	0.10	100	2.5	4
CD4153	75*	50	0.05	150	2.0	4

*@ 5 µA for CD4153

Foward Voltage Limits - CD3600, CD4150 and CD6640:

Limits	V_{F1} I_F = 1 mA dc	V_{F2} I_F = 10 mA dc	V_{F3} I_F = 50 mA dc (Pulsed)	V_{F4} I_F = 100 mA dc (Pulsed)	V_{F5} I_F = 200 mA dc (Pulsed)
	Vdc	Vdc	Vdc	Vdc	Vdc
mimimum	0.540	0.680	0.780	0.820	0.870
maximum	0.620	0.740	0.860	0.920	1.000

Foward Voltage Limits - CD4153:

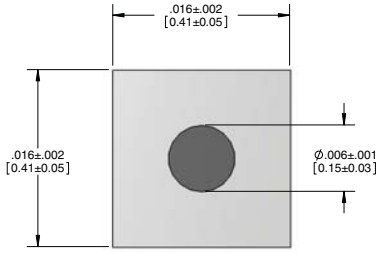
Limits	V_{F1} I_F = 100 µA dc	V_{F2} I_F = 250 µA dc	V_{F3} I_F = 1 mA dc	V_{F4} I_F = 2 mA dc	V_{F5} I_F = 10 mA dc	V_{F6} I_F = 20 mA dc
	Vdc	Vdc	Vdc	Vdc	Vdc	Vdc
mimimum	0.49	0.53	0.59	0.62	0.70	0.74
maximum	0.55	0.59	0.67	0.70	0.81	0.88

AEROFLEX METELICS

Revision Date: 12/14/2011
New Product

CD914, CD4148, CD4531, CD6642, CD3600, CD4150, CD6640, CD4153 & CD4454

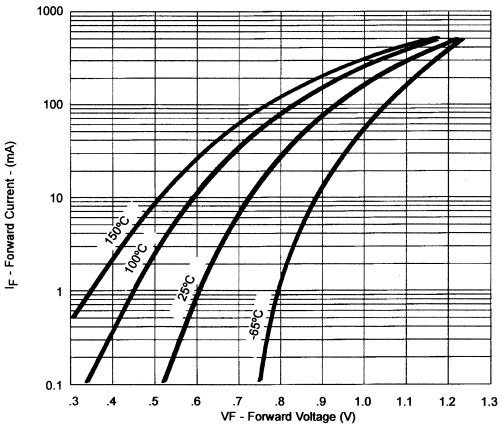
Outline Drawing



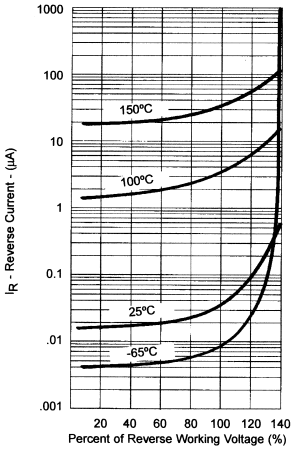
DESIGN DATA

METALLIZATION:	Top:	(Anode)	Al
	Back:	(Cathode)	Au
AL THICKNESS:	25,000 Å Minimum		
GOLD THICKNESS:	4,000 Å Minimum		
CHIP THICKNESS:	10 Mils		

Graphs



Typical Forward Current vs Forward Voltage



Typical Reverse Current vs Reverse Voltage

NOTE : All temperatures shown on graphs are junction temperatures

Aeroflex / Metelics, Inc.

ISO 9001: 2008 certified companies

975 Stewart Drive,
Sunnyvale, CA 94085
Tel: (408) 737-8181
Fax: (408) 733-7645

54 Grenier Field Road,
Londonderry, NH 03053
Tel: (603) 641-3800
Fax: (603)-641-3500

Sales: 888-641-SEMI (7364)

Hi-Rel Components
9 Hampshire Street,
Lawrence, MA 01840
Tel: (603) 641-3800
Fax: (978) 683-3264

www.aeroflex.com/metelics-hirelcomponents

www.aeroflex.com/metelics ***metelics-sales@aeroflex.com***

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