

## R8C/33T Group OCVREF characteristics

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Prepared on Jun. 30, 2010

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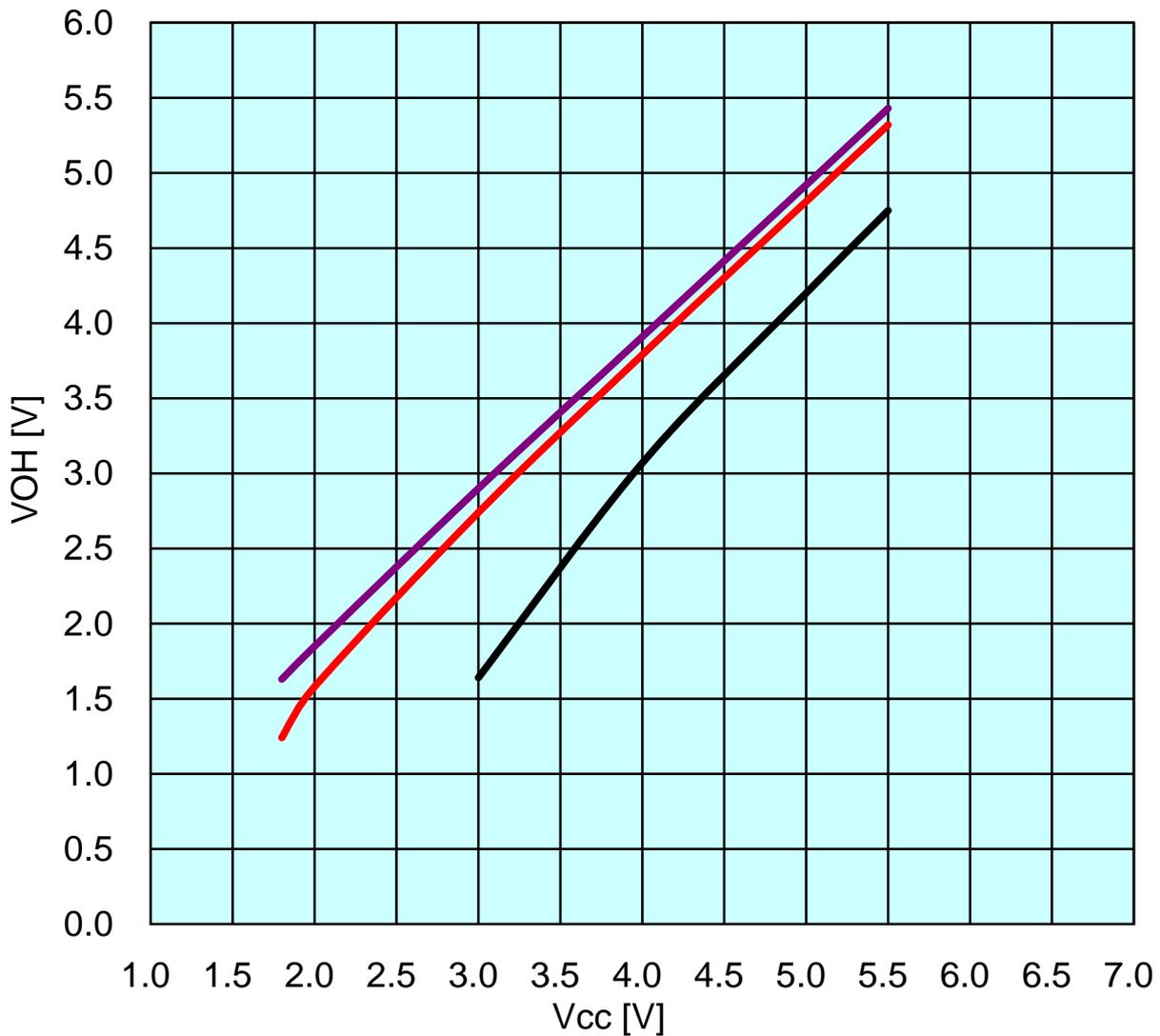
# VOH vs VCC

(Port Drive Capacity=High)

Prepared on Jun. 30, 2010

R8C/33T Group  
Topr=25degrees C  
IOH=-20mA, -5mA, -2mA

— IOH=-20mA      — IOH=-5mA  
— IOH=-2mA



The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

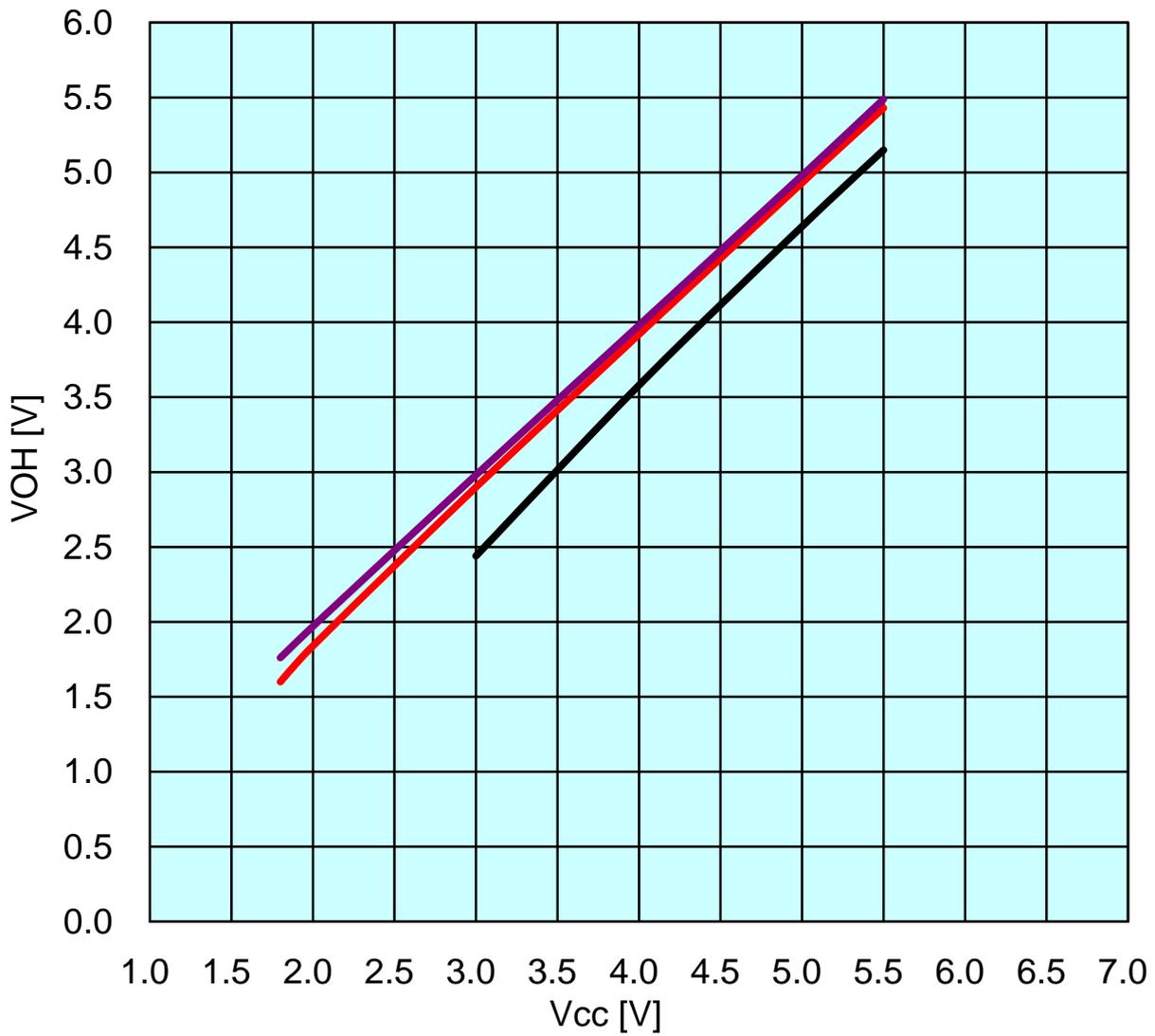
# VOH vs VCC

(Port Drive Capacity=Low)

Prepared on Jun. 30, 2010

R8C/33T Group  
Topr=25degrees C  
IOH= -5mA, -1mA, -200uA

— IOH=-5mA      — IOH=-1mA  
— IOH=-200uA



The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

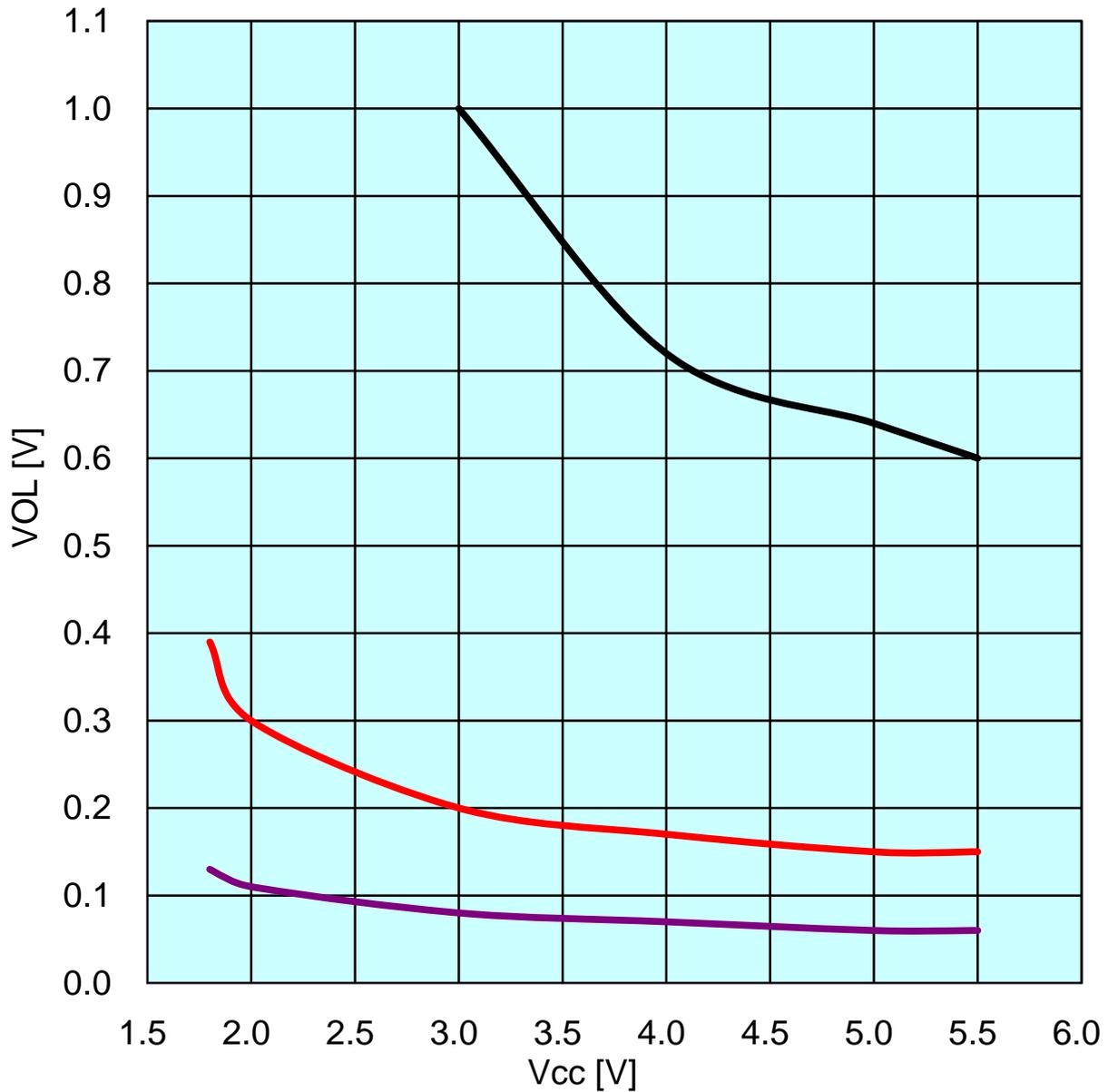
# VOL vs Vcc

(Port Drive Capacity=High)

Prepared on Jun. 30, 2010

R8C/33T Group  
Topr=25degrees C  
IOL=20mA, 5mA, 2mA

— IOL=20mA    — IOL=5mA  
— IOL=2mA



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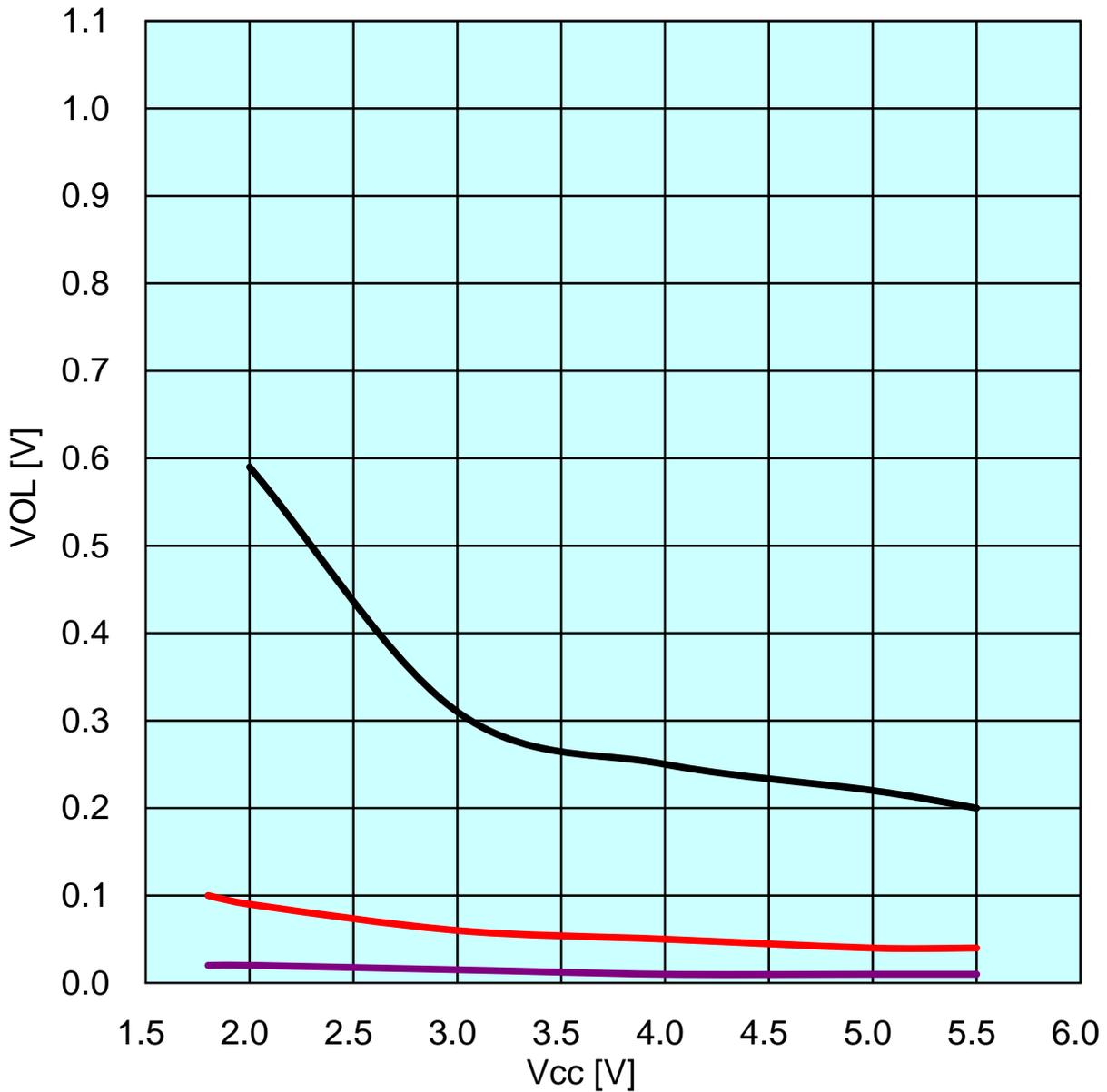
# VOL vs Vcc

(Port Drive Capacity=Low)

Prepared on Jun. 30, 2010

R8C/33T Group  
Topr=25degrees C  
IOL=5mA, 1mA, 200uA

— IOL=5mA      — IOL=1mA  
— IOL=200uA



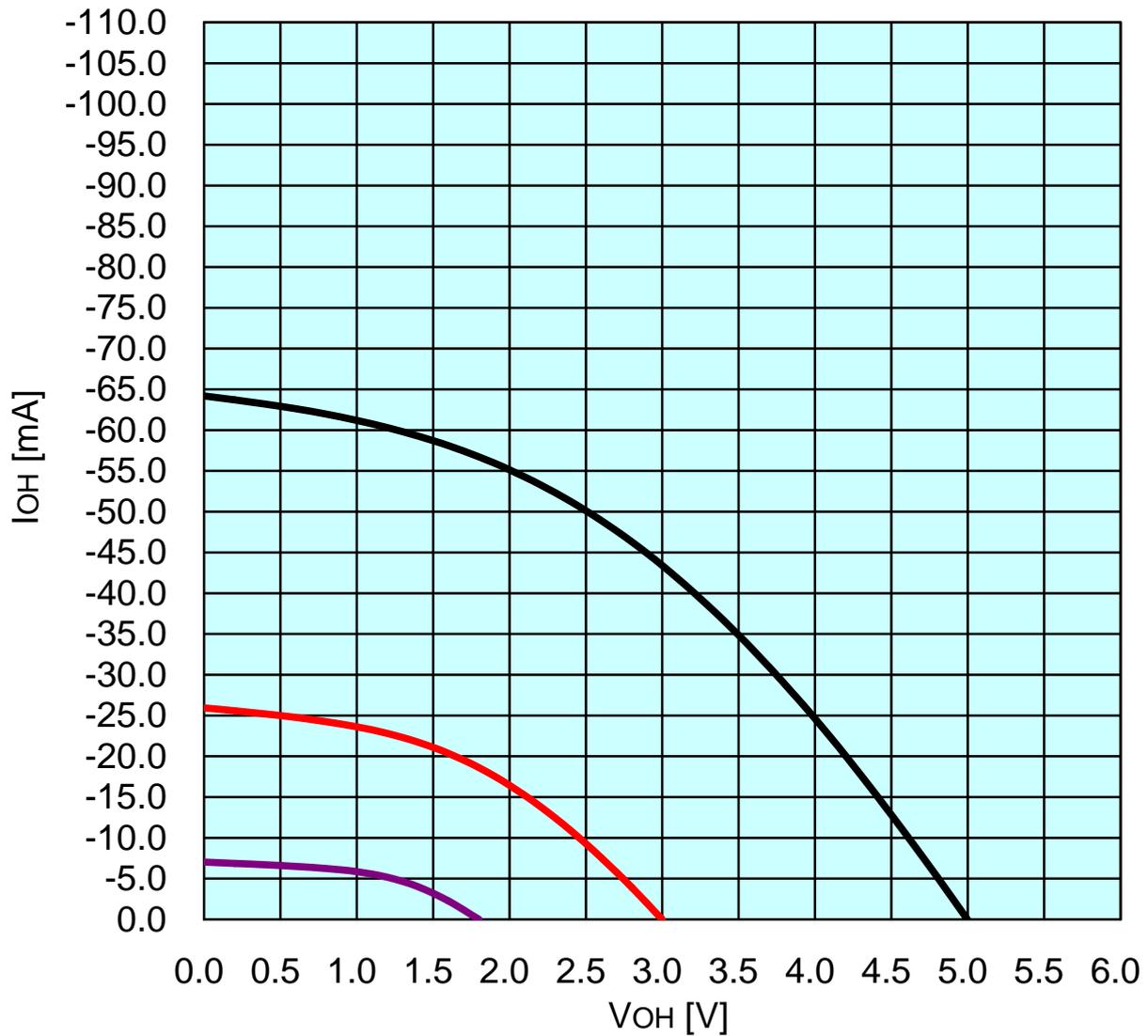
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# IOH vs VOH (Port Drive Capacity=High)

Prepared on Jun. 30, 2010

R8C/33T Group  
Topr=25degrees Celsius  
Vcc=5V, 3V, 1.8V

— Vcc=5V — Vcc=3V — Vcc=1.8V



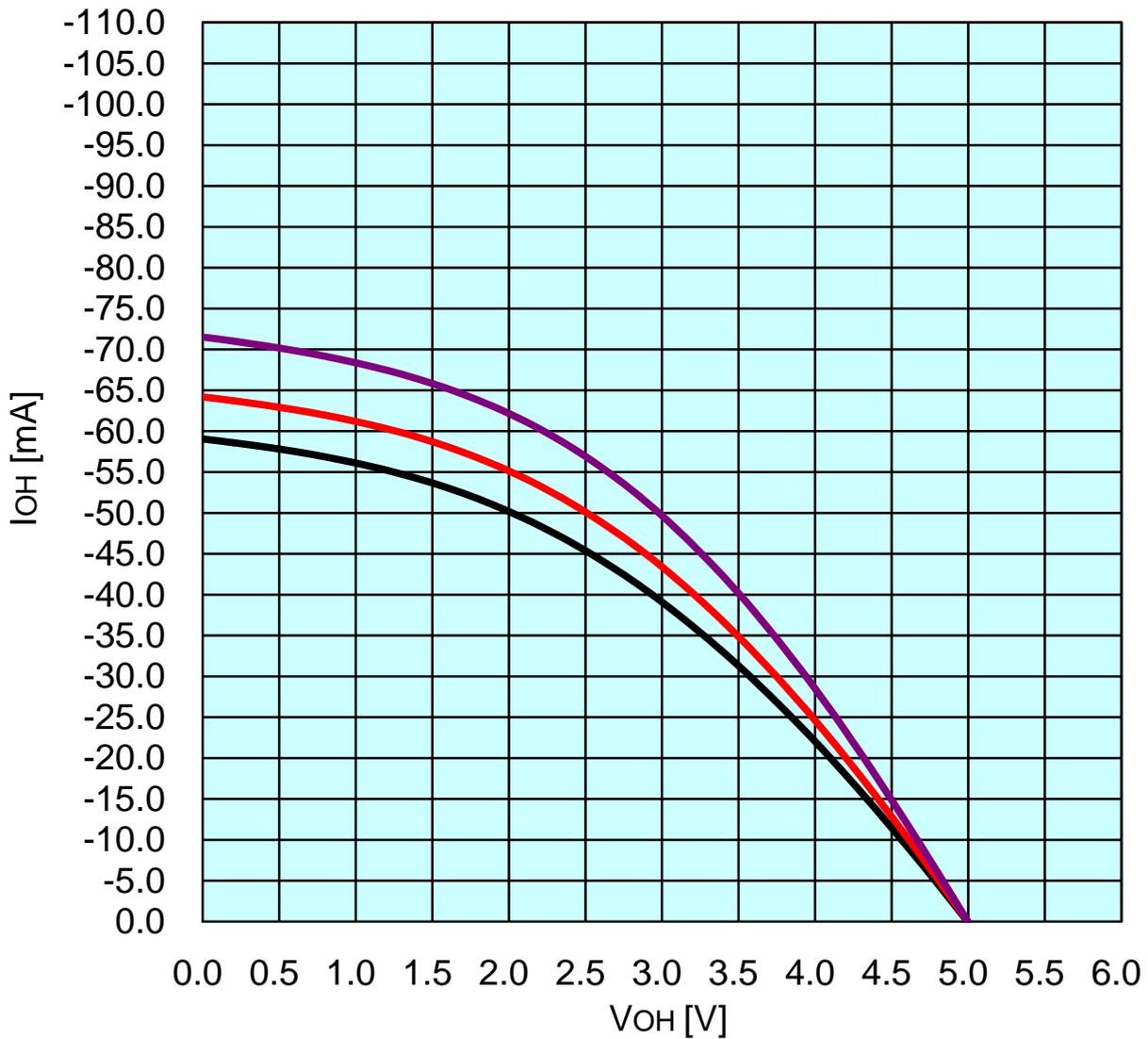
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# IOH vs VOH (Port Drive Capacity=High)

Prepared on Jun. 30, 2010

R8C/33T Group  
Vcc=5V

— 85degreesC    — 25degreesC  
— -40degreesC



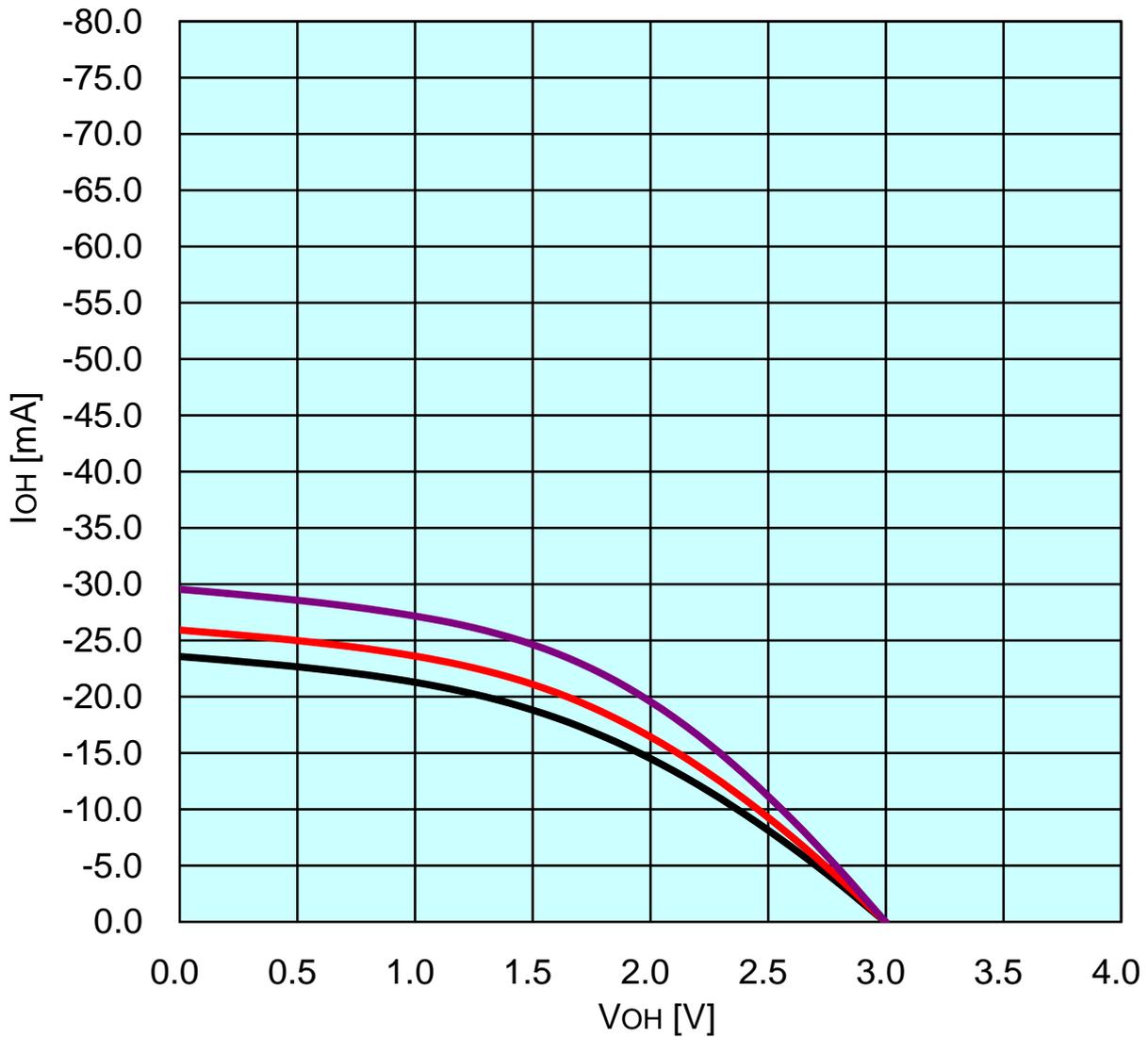
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# IOH vs VOH (Port Drive Capacity=High)

Prepared on Jun. 30, 2010

R8C/33T Group  
Vcc=3V

— 85degreesC    — 25degreesC  
— -40degreesC



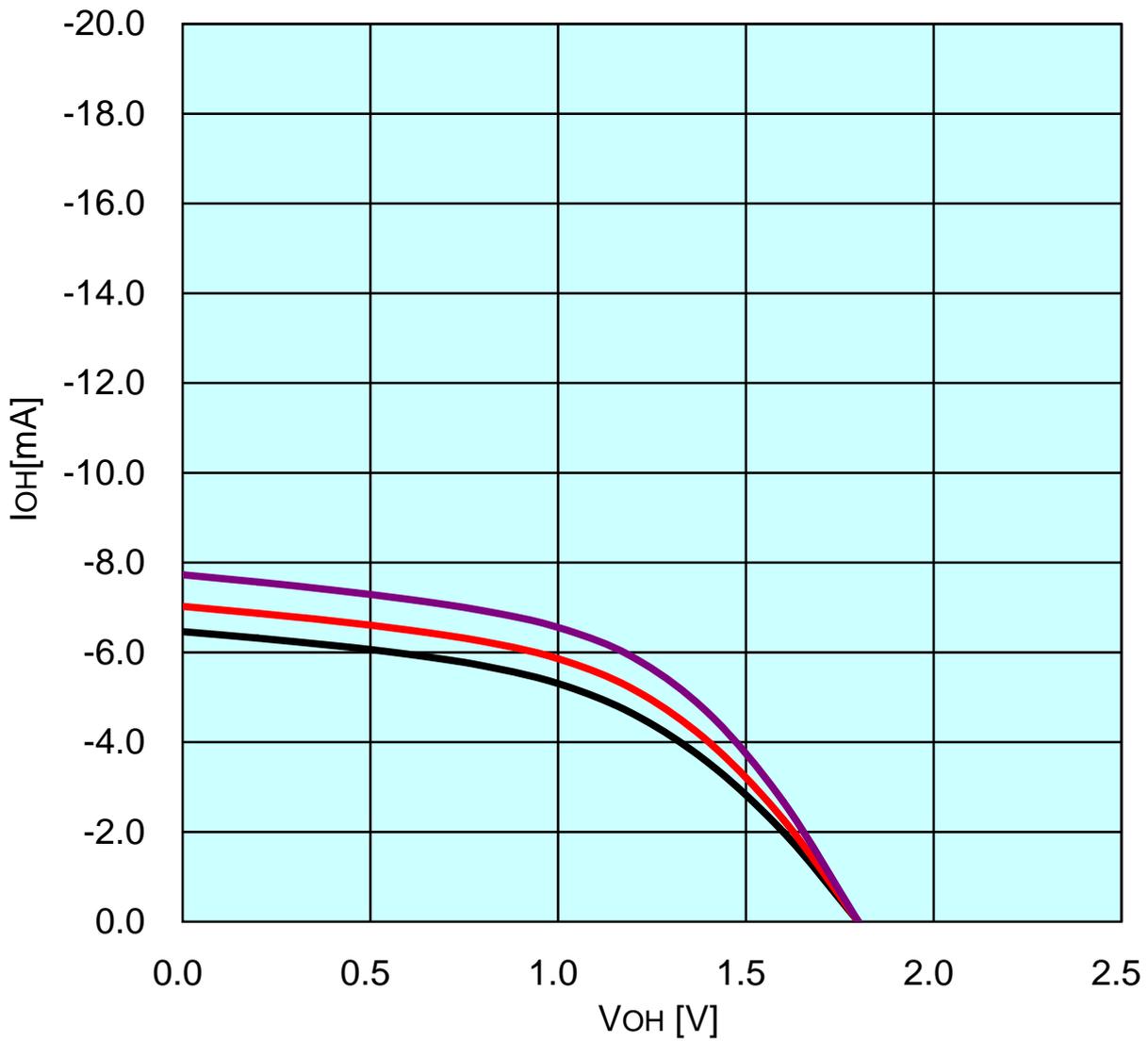
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# IOH vs VOH (Port Drive Capacity=High)

Prepared on Jun. 20, 2010

R8C/33T Group  
Vcc=1.8V

— 85degreesC    — 25degreesC  
— -40degreesC



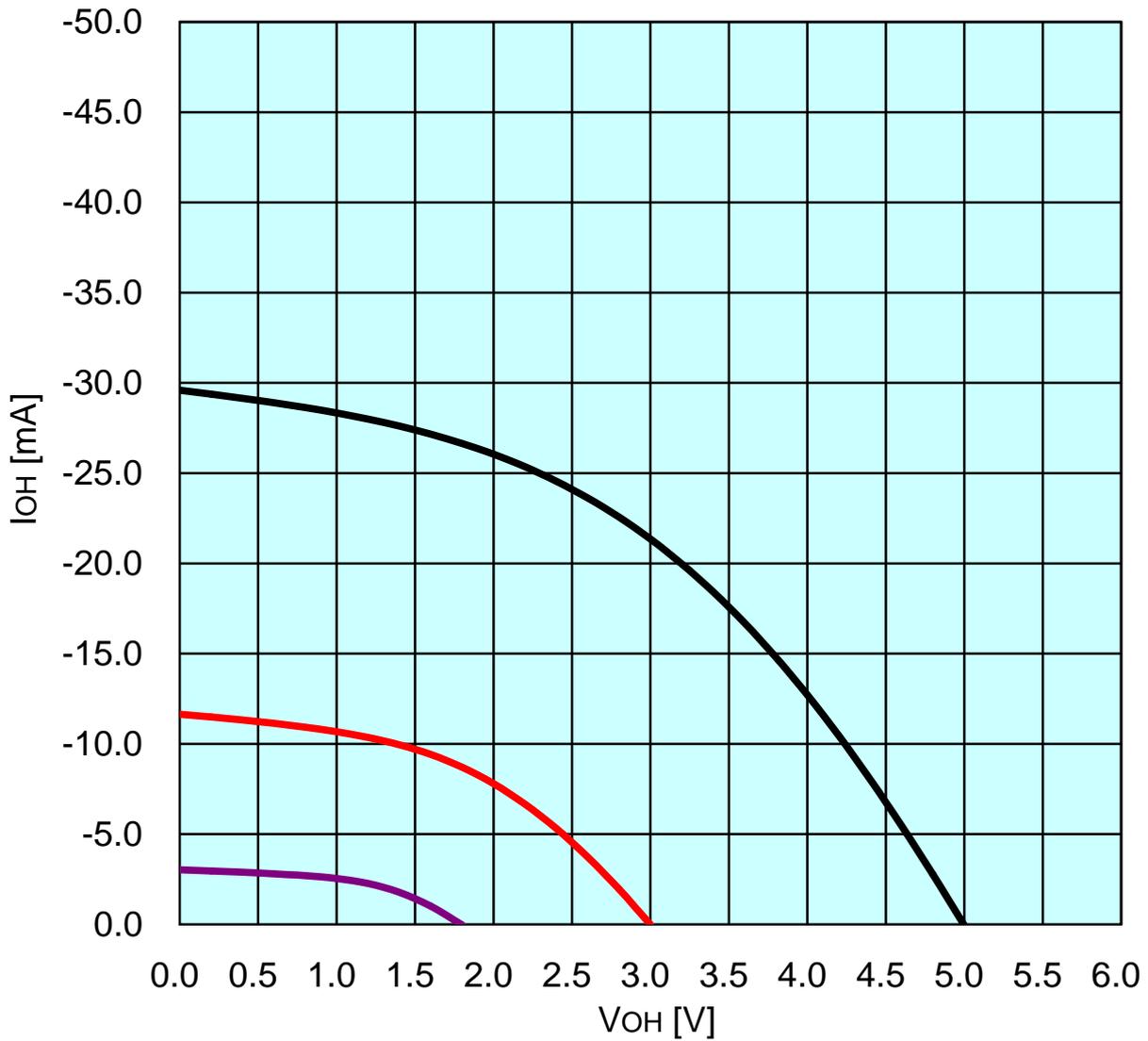
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# IOH vs VOH (Port Drive Capacity=Low)

Prepared on Jun. 30, 2010

R8C/33T Group  
Topr=25degrees Celsius  
Vcc=5V, 3V, 1.8V

— Vcc=5V — Vcc=3V — Vcc=1.8V



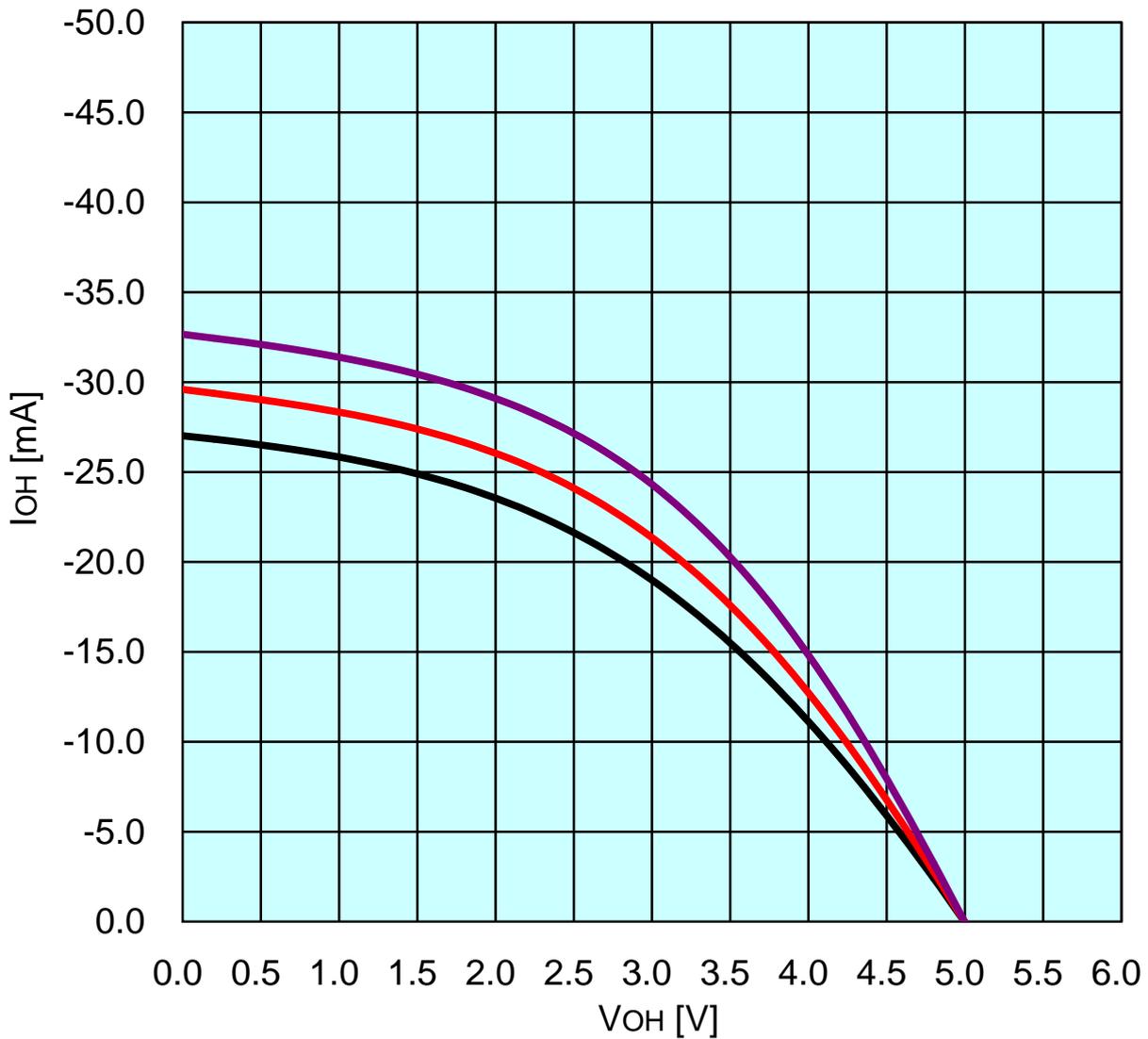
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# IOH vs VOH (Port Drive Capacity=Low)

Prepared on Jun. 30, 2010

R8C/33T Group  
Vcc=5V

— 85degreesC    — 25degreesC  
— -40degreesC



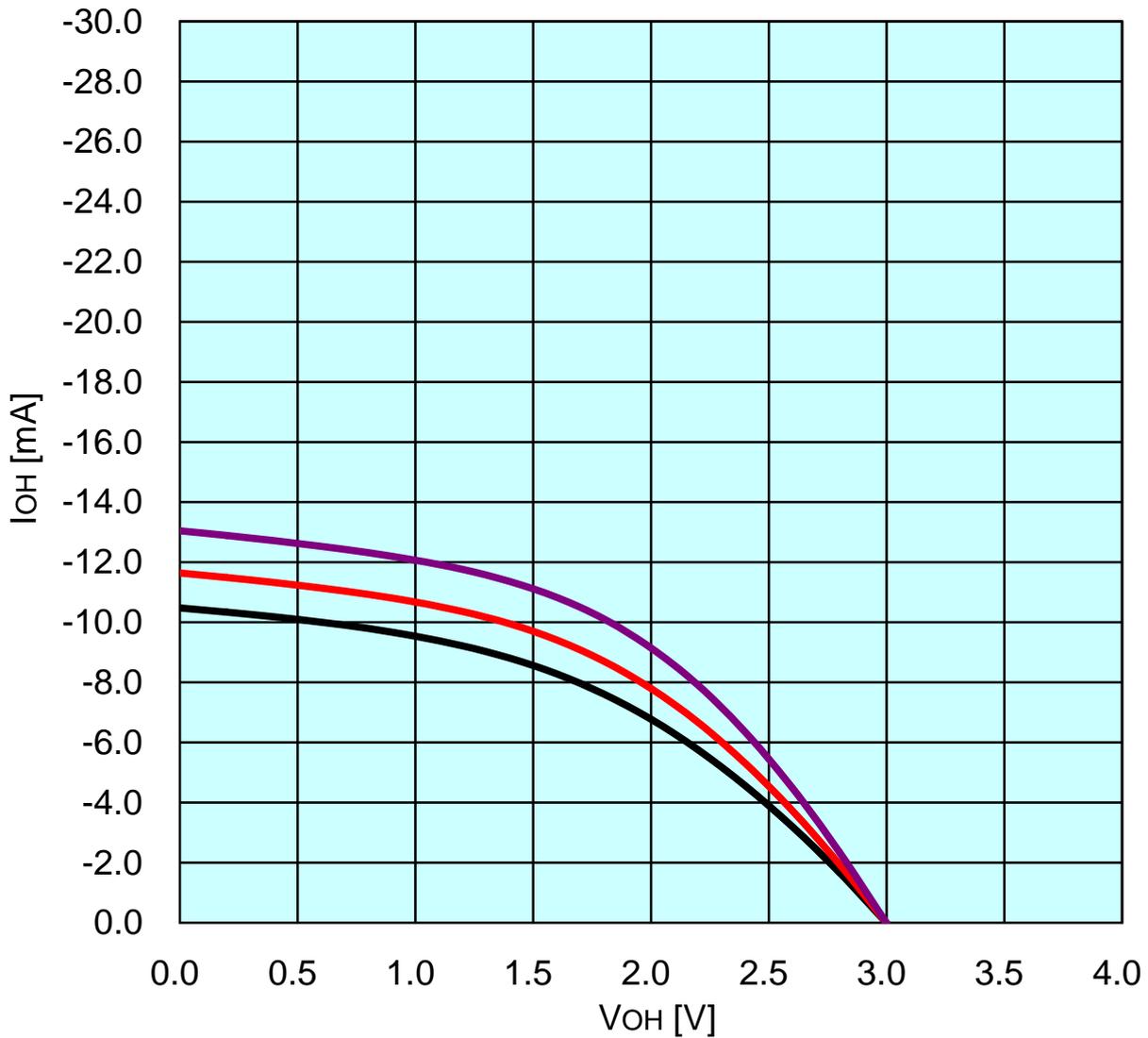
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# IOH vs VOH (Port Drive Capacity=Low)

Prepared on Jun. 30, 2010

R8C/33T Group  
Vcc=3V

— 85degreesC    — 25degreesC  
— -40degreesC



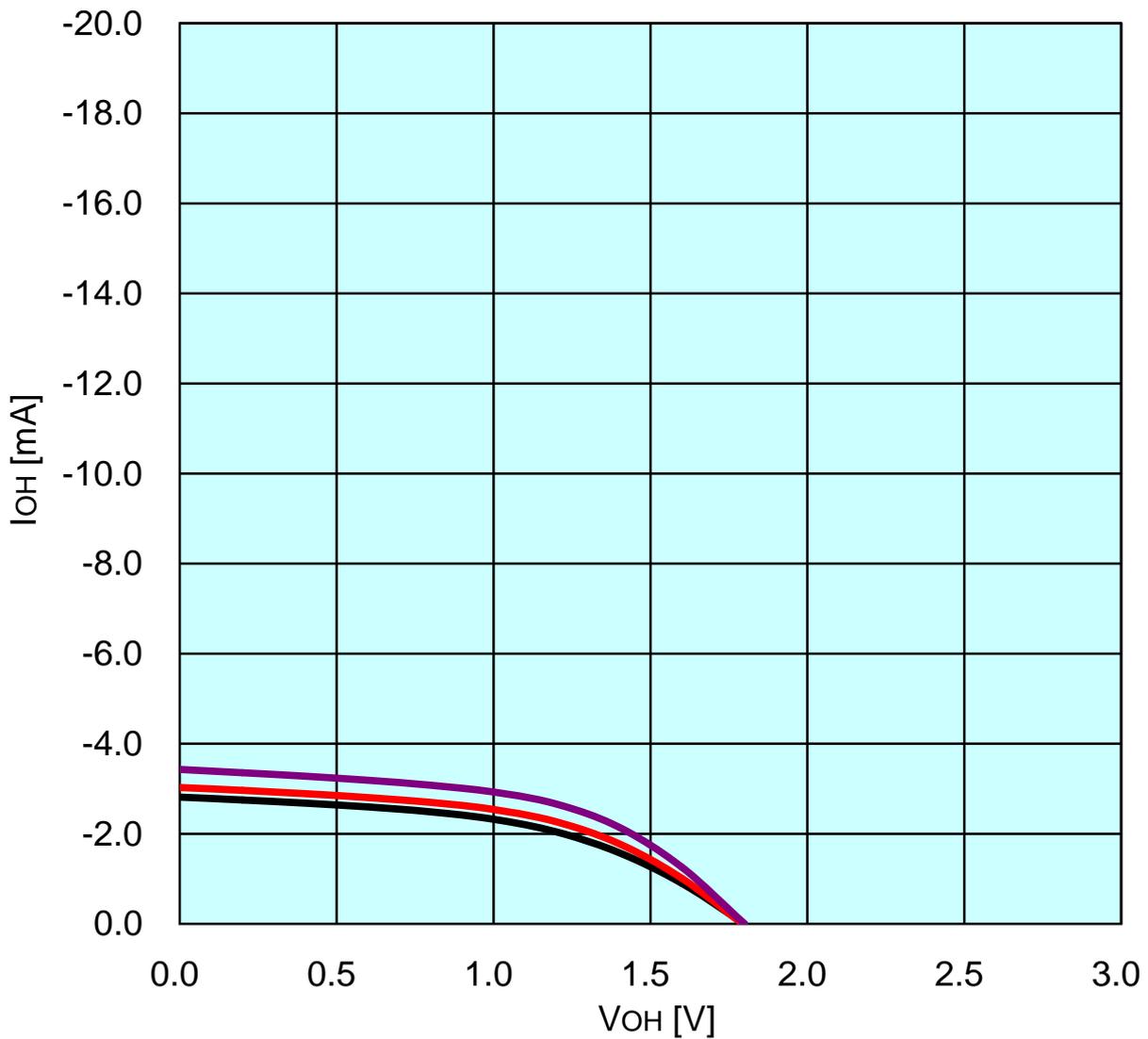
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# IOH vs VOH (Port Drive Capacity=Low)

Prepared on Jun. 30, 2010

R8C/33T Group  
Vcc=1.8V

— 85degreesC    — 25degreesC  
— -40degreesC



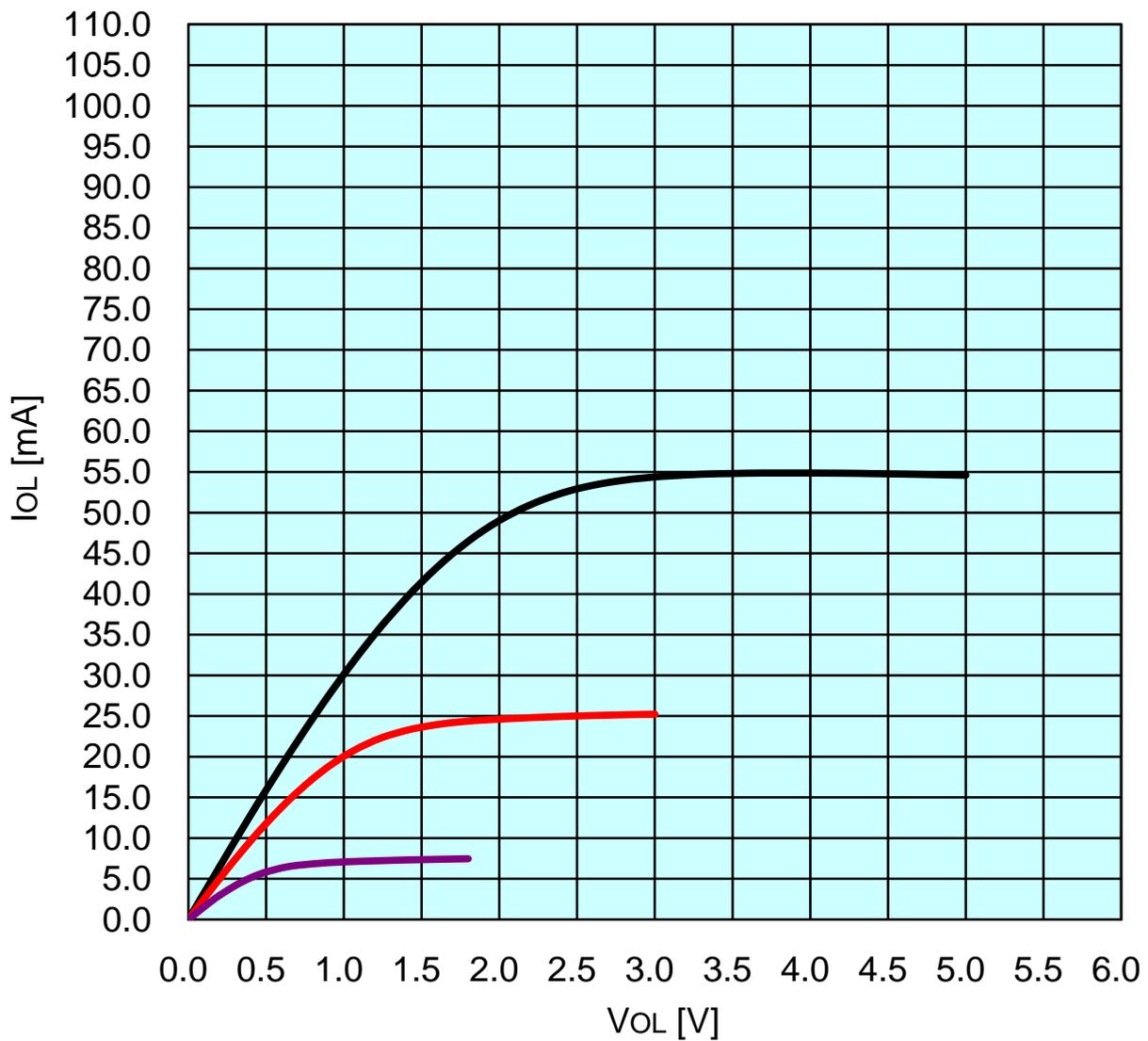
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# IOL vs VOL (Port Drive Capacity=High)

Prepared on Jun. 30, 2010

R8C/33T Group  
Topr=25degrees Celsius  
Vcc=5V, 3V, 1.8V

— Vcc=5V — Vcc=3V — Vcc=1.8V



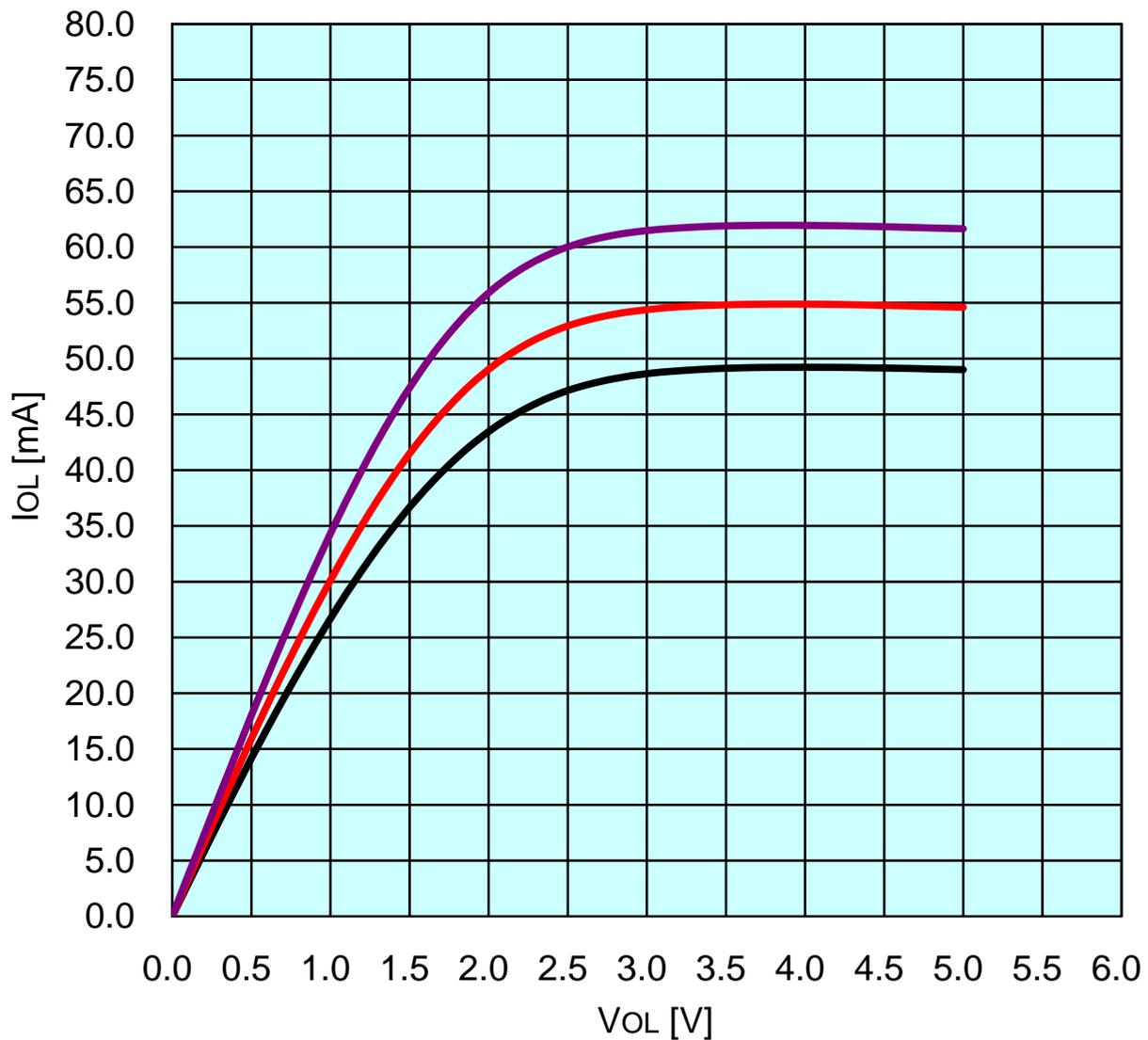
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# IOL vs VOL (Port Drive Capacity=High)

Prepared on Jun. 30, 2010

R8C/33T Group  
Vcc=5.0V

— 85degreeC      — 25degreeC  
— -40degreeC



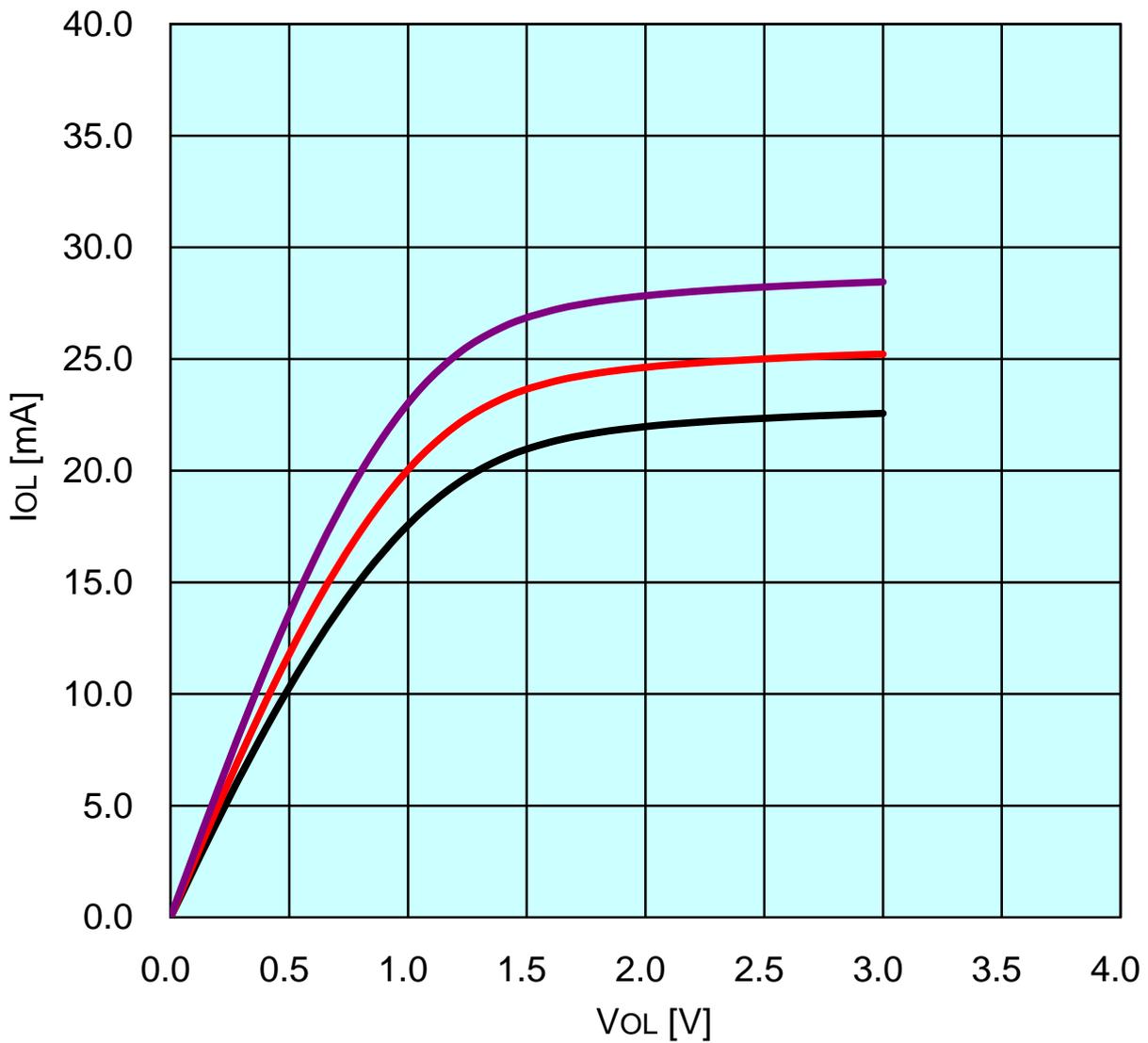
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# IOL vs VOL (Port Drive Capacity=High)

Prepared on Jun. 30, 2010

R8C/33T Group  
Vcc=3.0V

— 85degreeC      — 25degreeC  
— -40degreeC



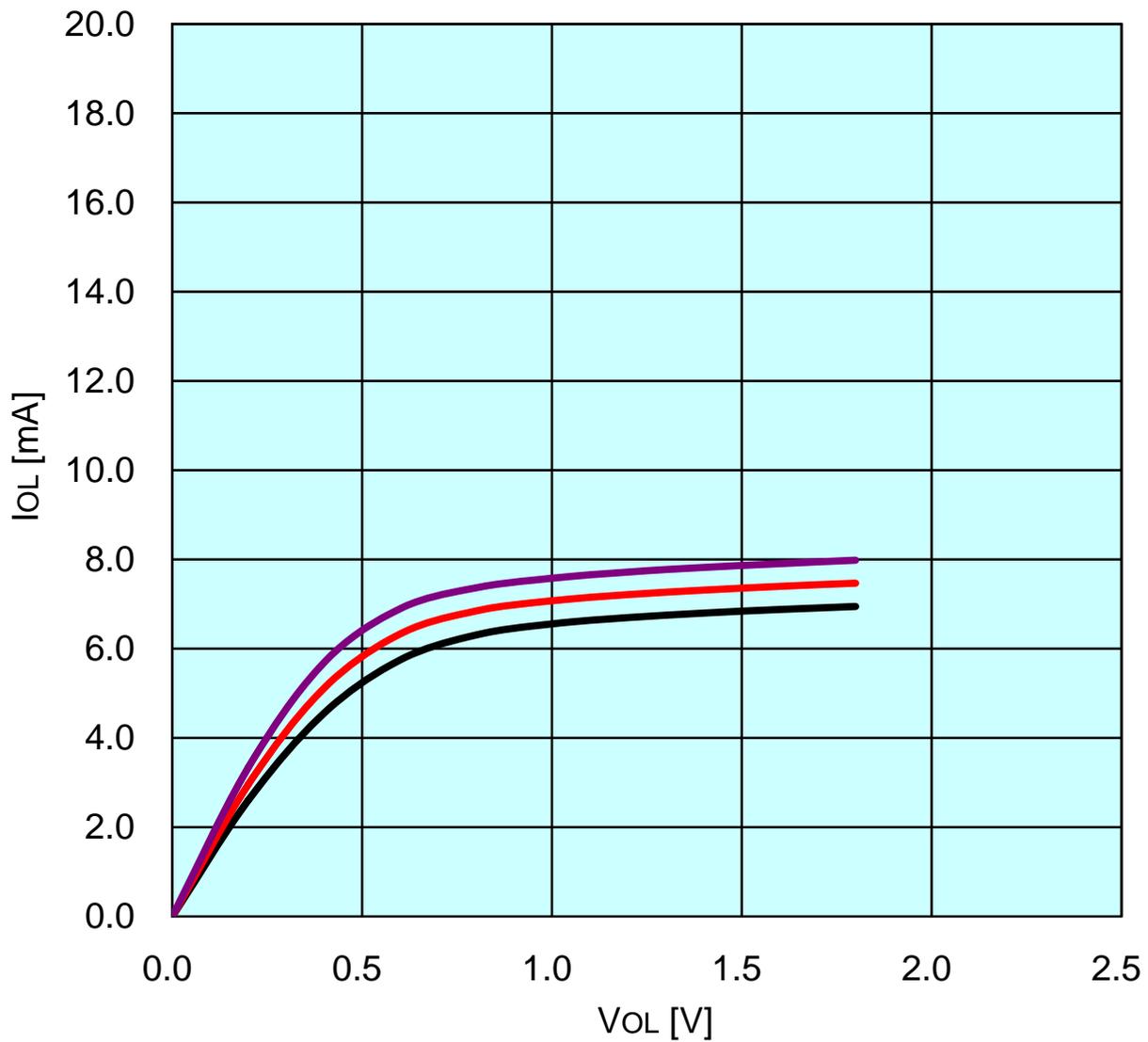
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# IOL vs VOL (Port Drive Capacity=High)

Prepared on Jun. 30, 2010

R8C/33T Group  
Vcc=1.8V

— 85degreeC      — 25degreeC  
— -40degreeC



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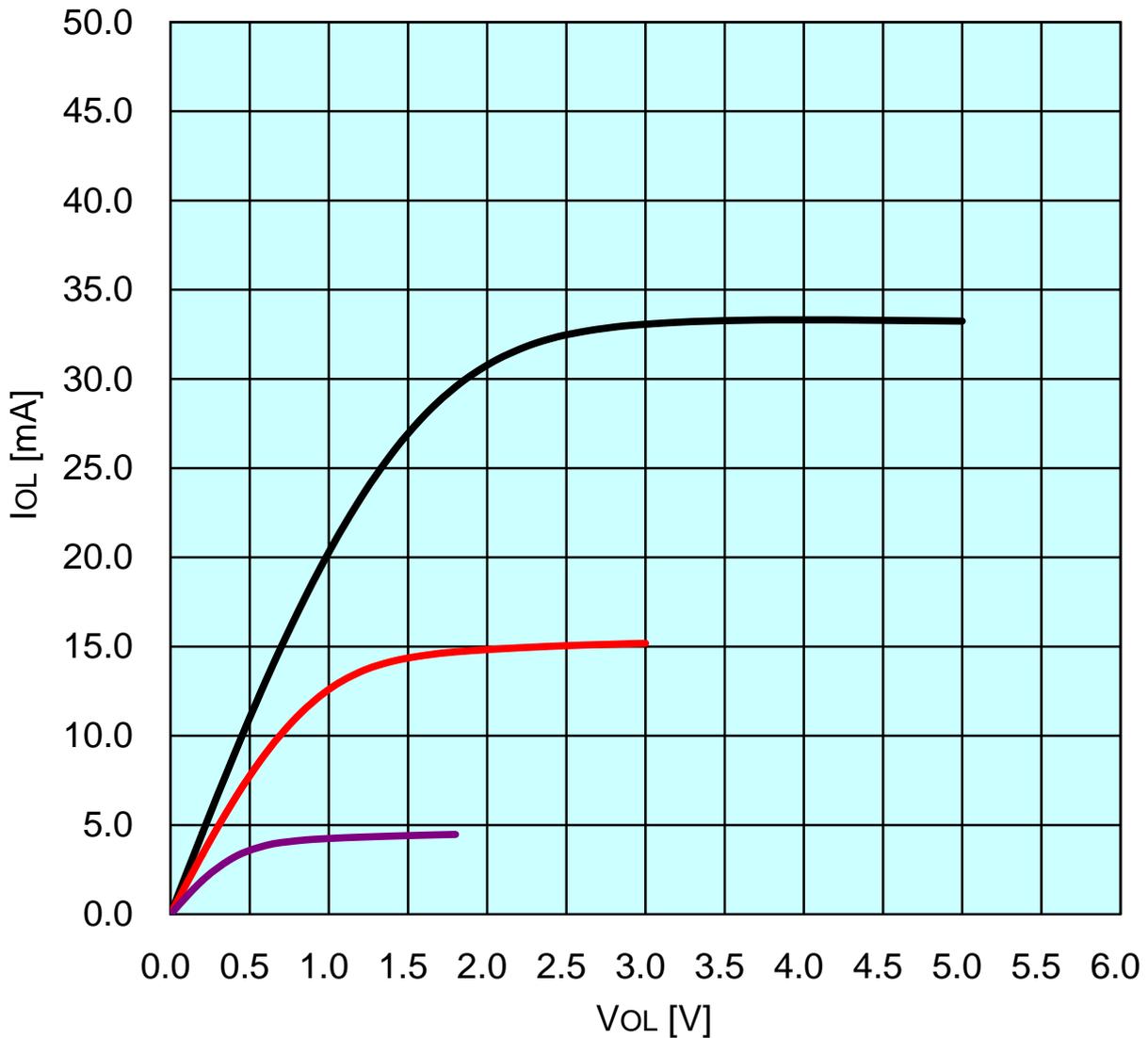
# IOL vs VOL

(Port Drive Capacity=Low)

Prepared on Jun. 30, 2010

R8C/33T Group  
Topr=25degrees Celsius  
Vcc=5V, 3V, 1.8V

— Vcc=5V — Vcc=3V — Vcc=1.8V



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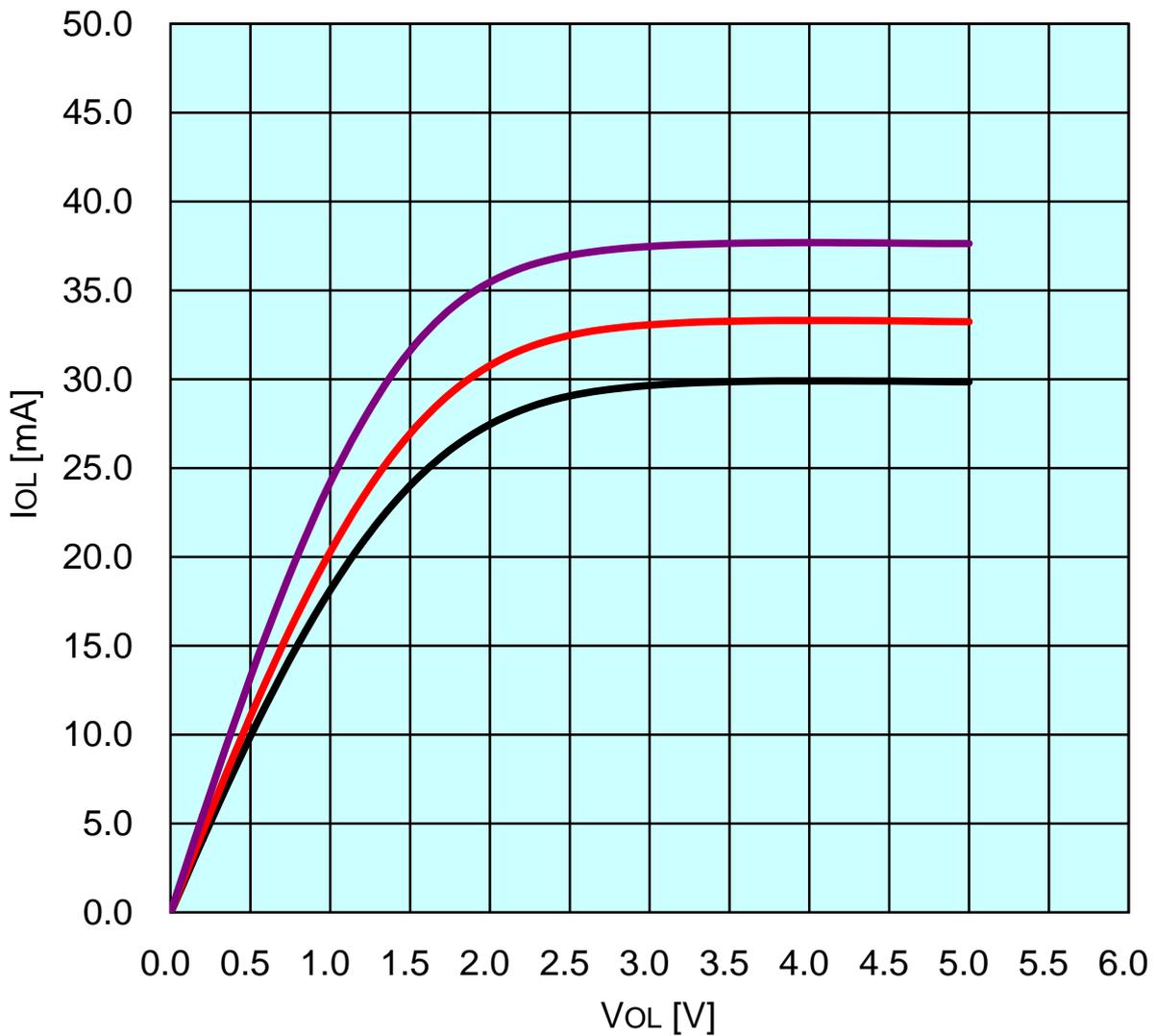
# IOL vs VOL

(Port Drive Capacity=Low)

Prepared on Jun. 30, 2010

R8C/33T Group  
Vcc=5V

— 85degreeC      — 25degreeC  
— -40degreeC



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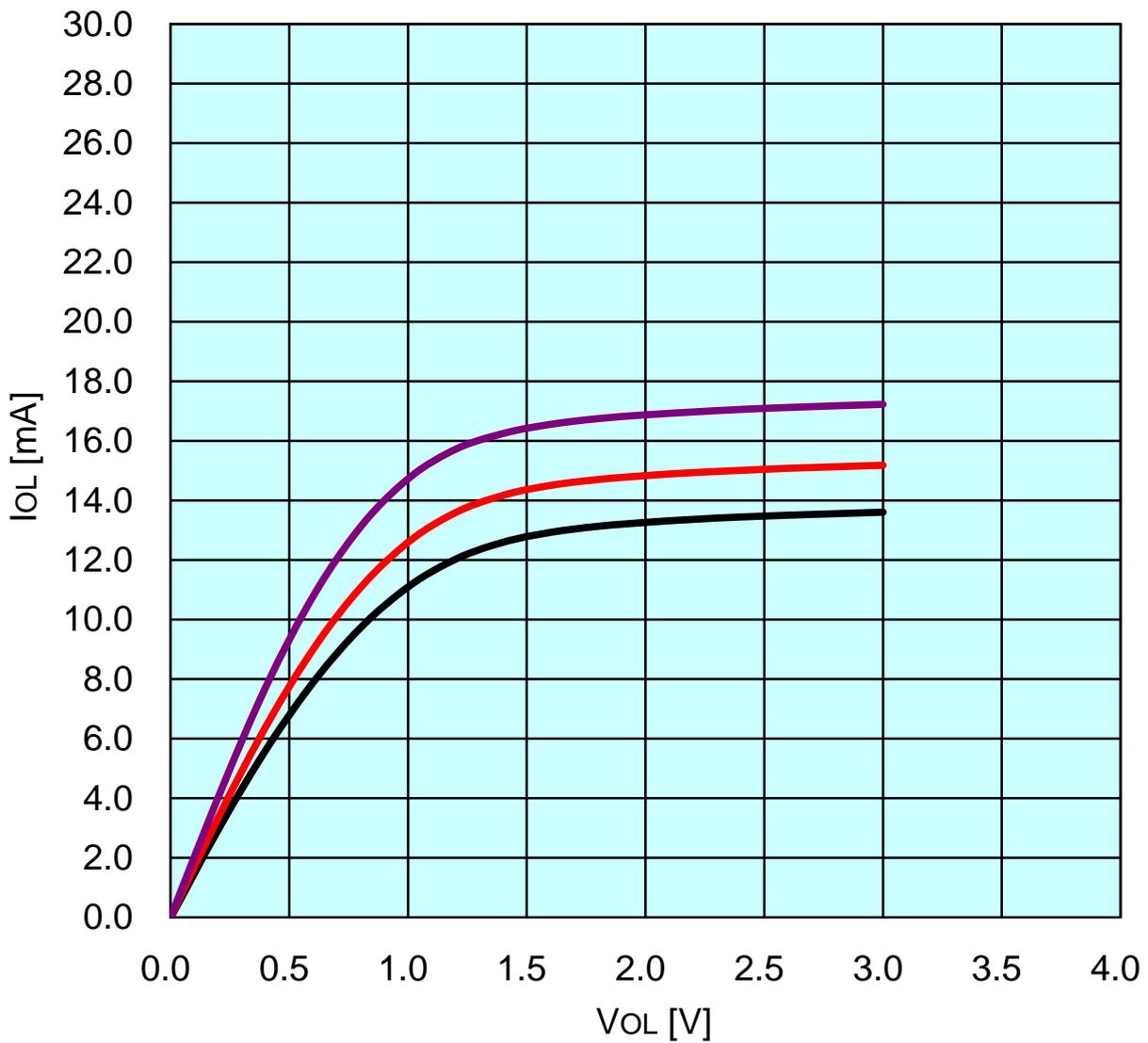
# IOL vs VOL

(Port Drive Capacity=Low)

Prepared on Jun. 30, 2010

R8C/33T Group  
Vcc=3V

— 85degreeC      — 25degreeC  
— -40degreeC



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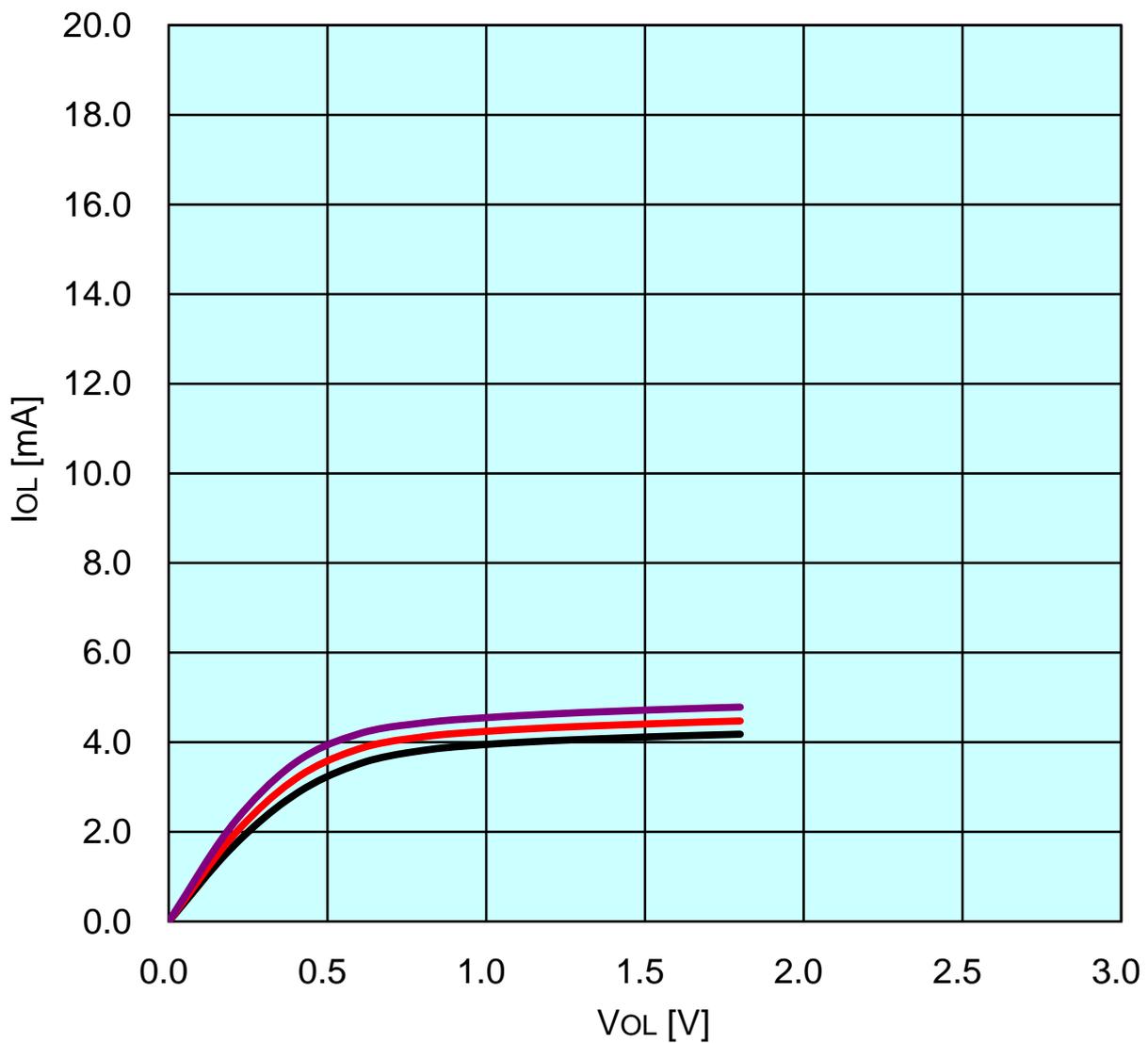
# IOL VS VOL

(Port Drive Capacity=Low)

Prepared on Jun. 30, 2010

R8C/33T Group  
Vcc=1.8V

— 85degreeC      — 25degreeC  
— -40degreeC



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