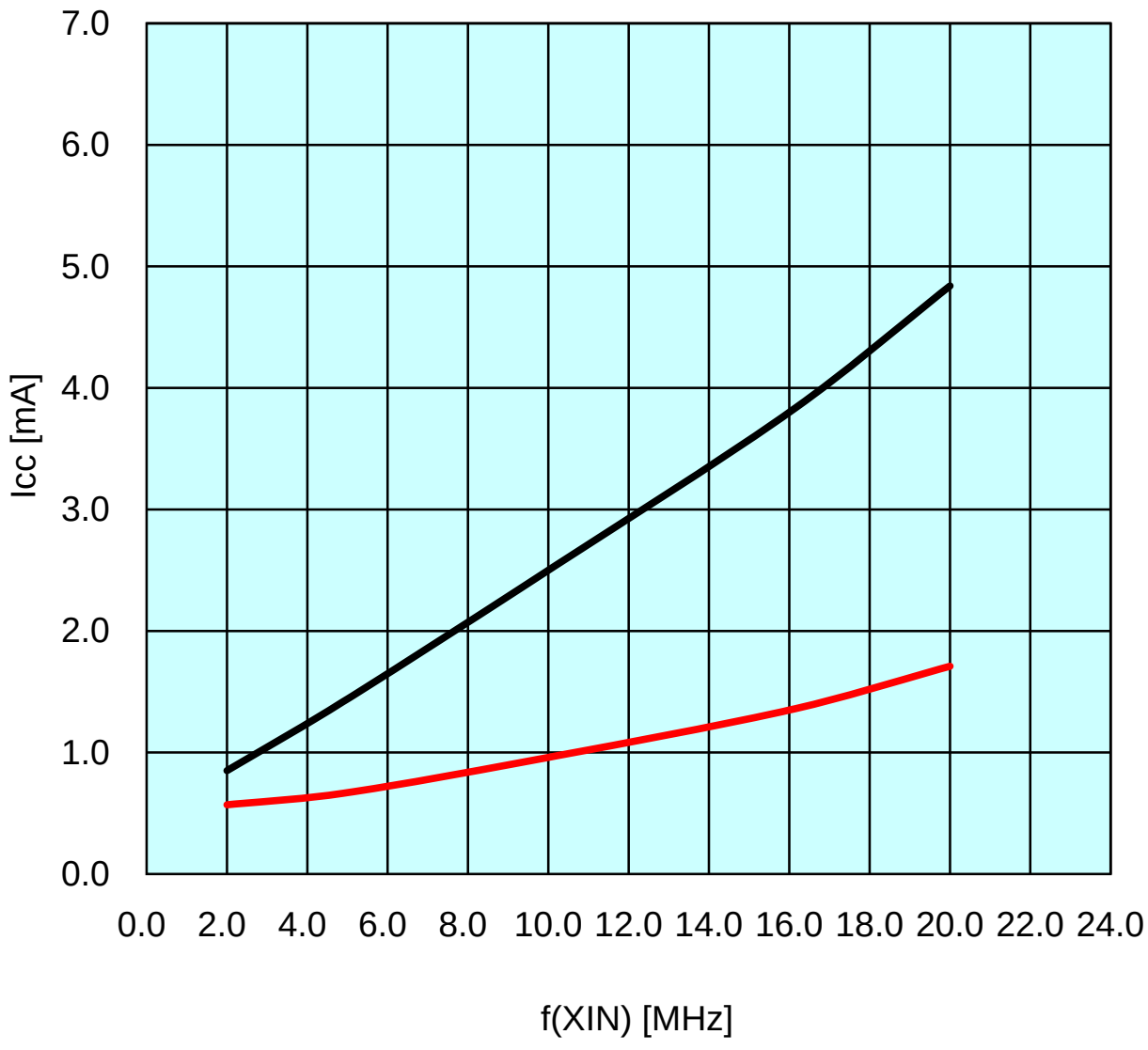
R8C/33T Group
OCVREF characteristics

Page Prepared on Jun. 30, 2010

Icc vs f(XIN)
(High-speed clock mode)

Prepared on Jun. 30,

R8C/33T Group
Vcc=5V
Topr=25degrees C
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Sensor Control Unit on

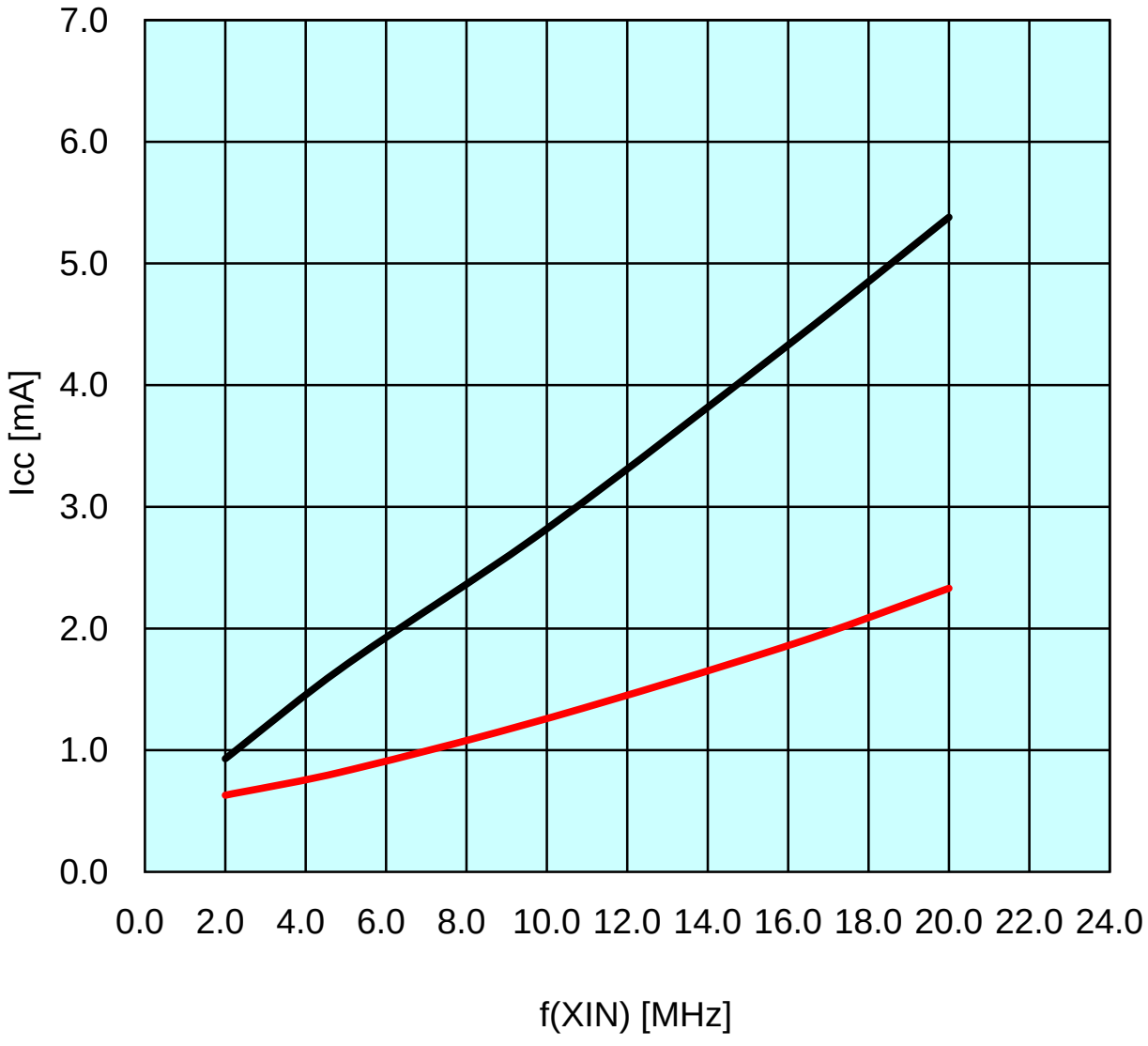


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs f(XIN)
(High-speed clock mode)

Prepared on Jun. 30,

R8C/33T Group
Vcc=5V
Topr=85degrees C
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Sensor Control Unit on

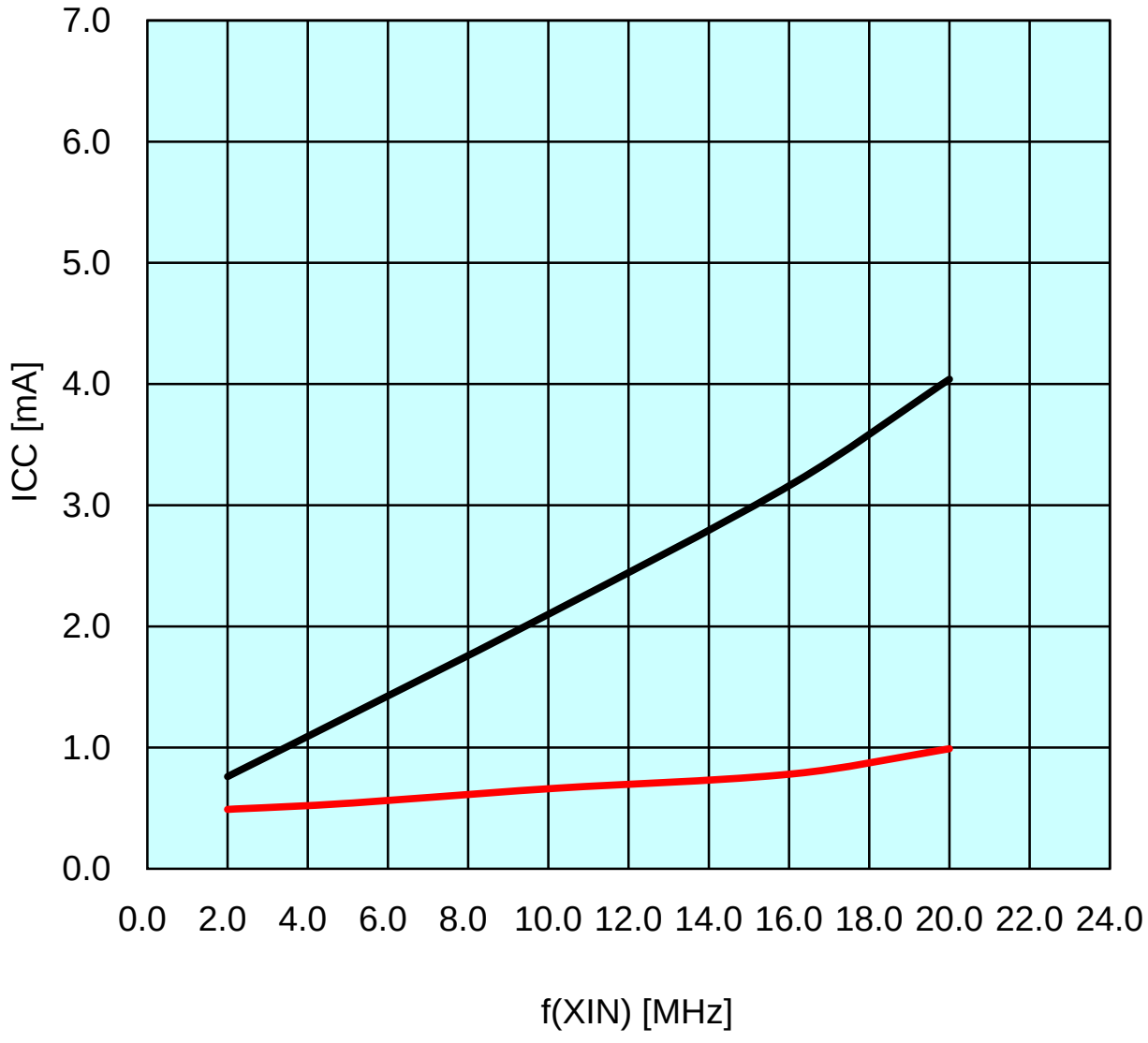


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs f(XIN)
(High-speed clock mode)

Prepared on Jun. 30,

R8C/33T Group
Vcc=5V
Topr=-40degrees C
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Sensor Control Unit on

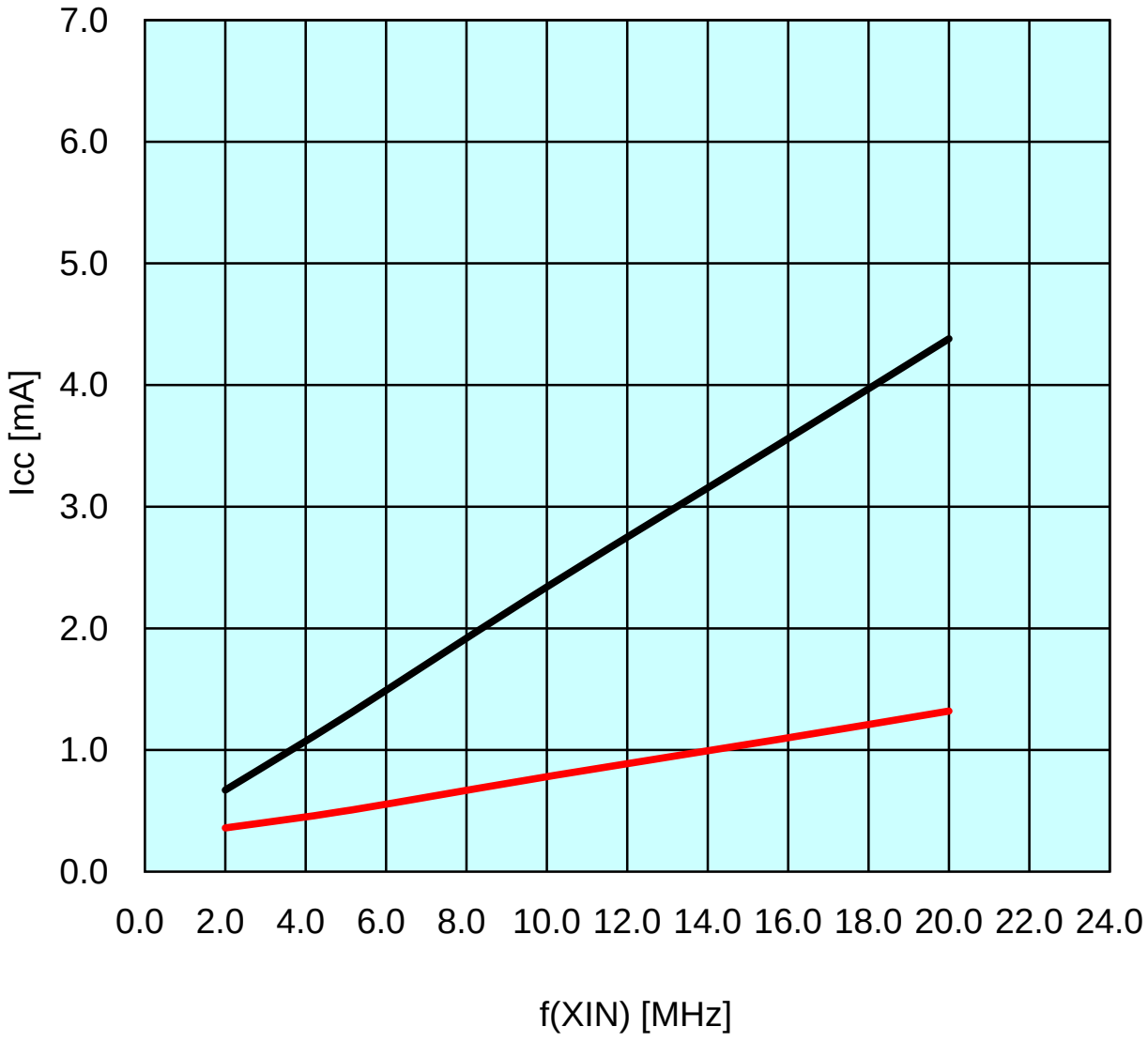


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs f(XIN)
(High-speed clock mode)

Prepared on Jun. 30,

R8C/33T Group
Vcc=3V
Topr=25degrees C
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Sensor Control Unit on

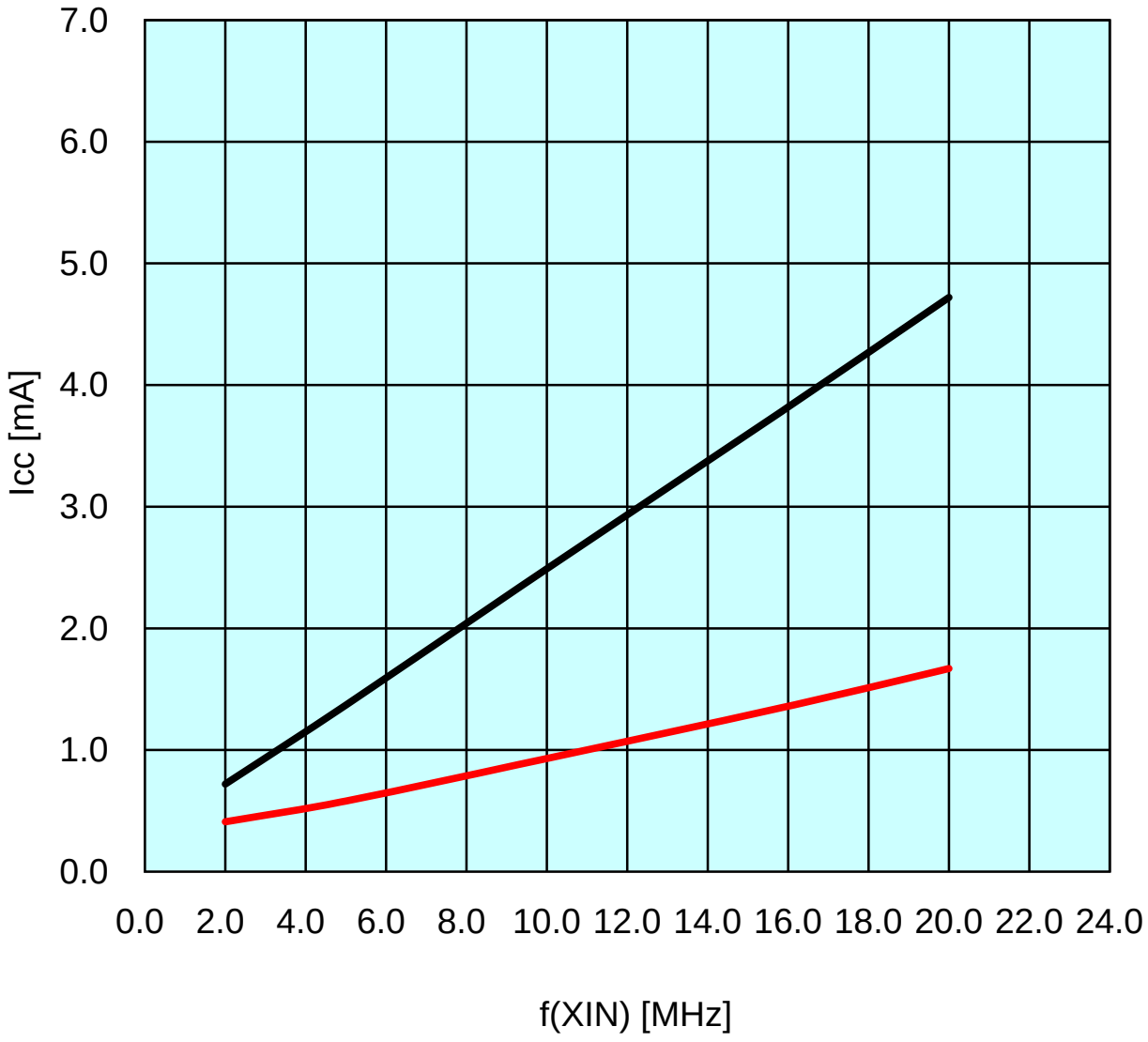


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs f(XIN)
(High-speed clock mode)

Prepared on Jun. 30,

R8C/33T Group
Vcc=3V
Topr=85degrees C
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Sensor Control Unit on

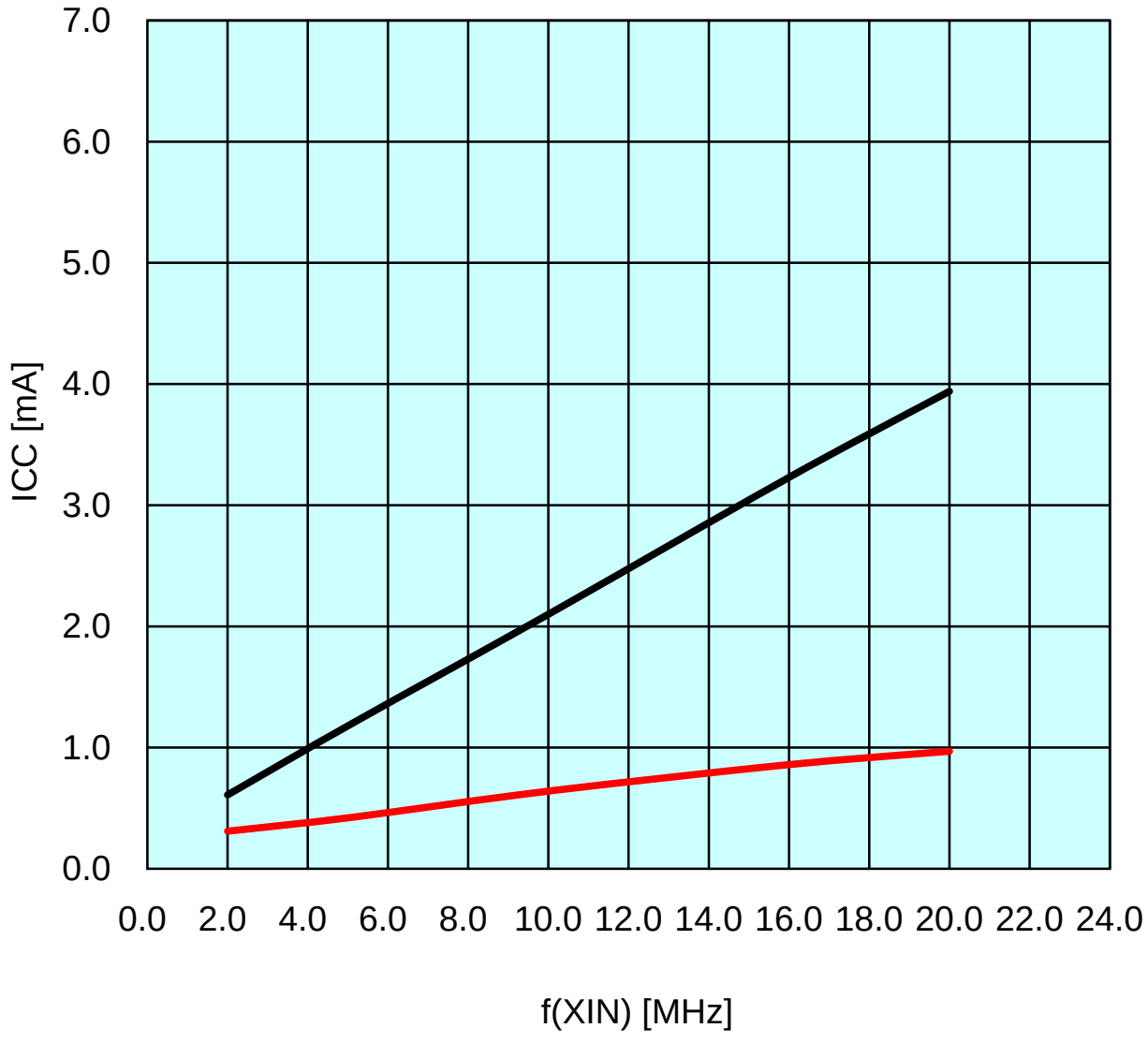


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs f(XIN)
(High-speed clock mode)

Prepared on Jun. 30,

R8C/33T Group
Vcc=3V
Topr=-40degrees C
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Sensor Control Unit on

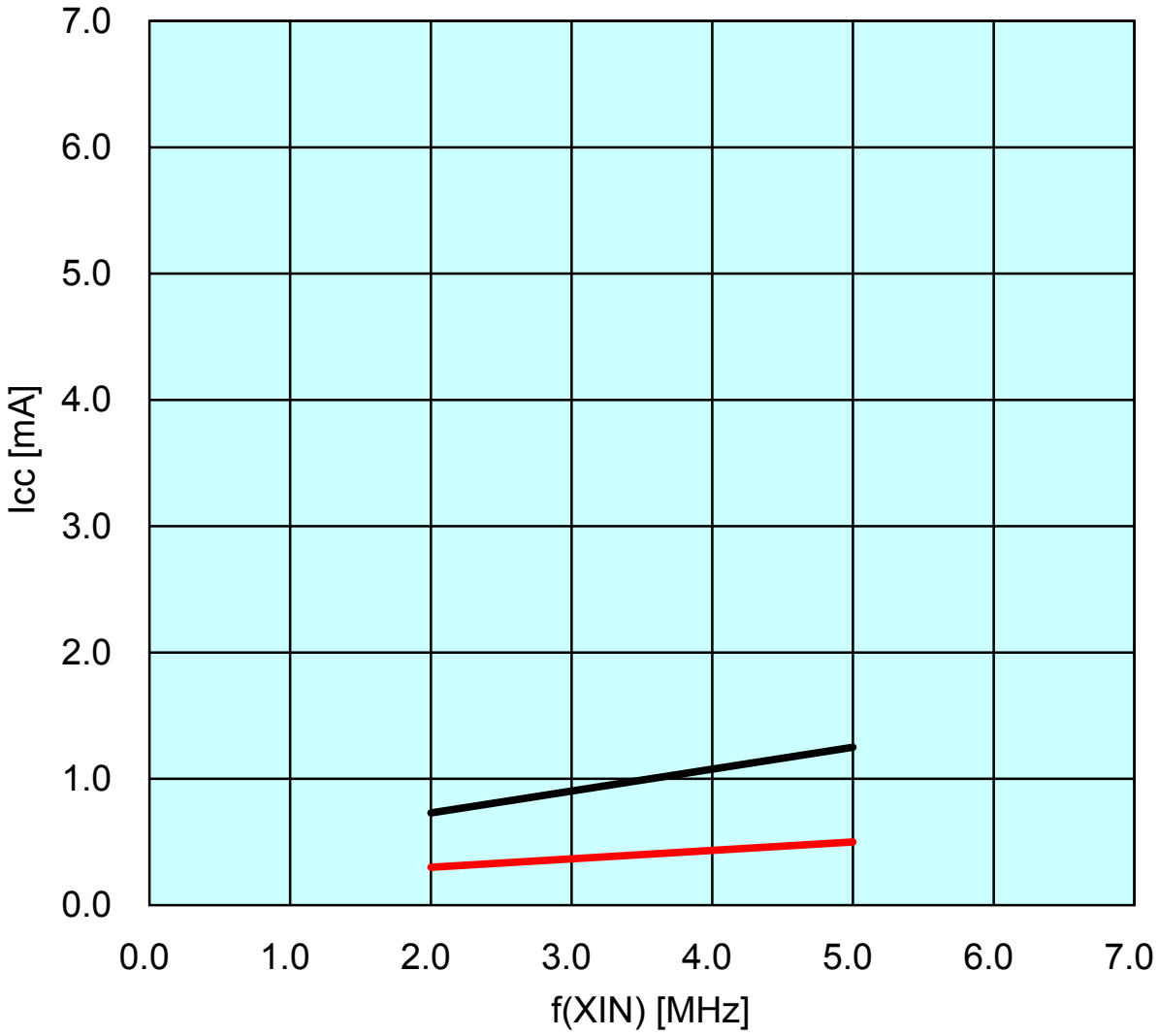


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs f(XIN)
(High-speed clock mode)

Prepared on Jun. 30,

R8C/33T Group
Vcc=1.8V
Topr=25degrees C
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Sensor Control Unit on

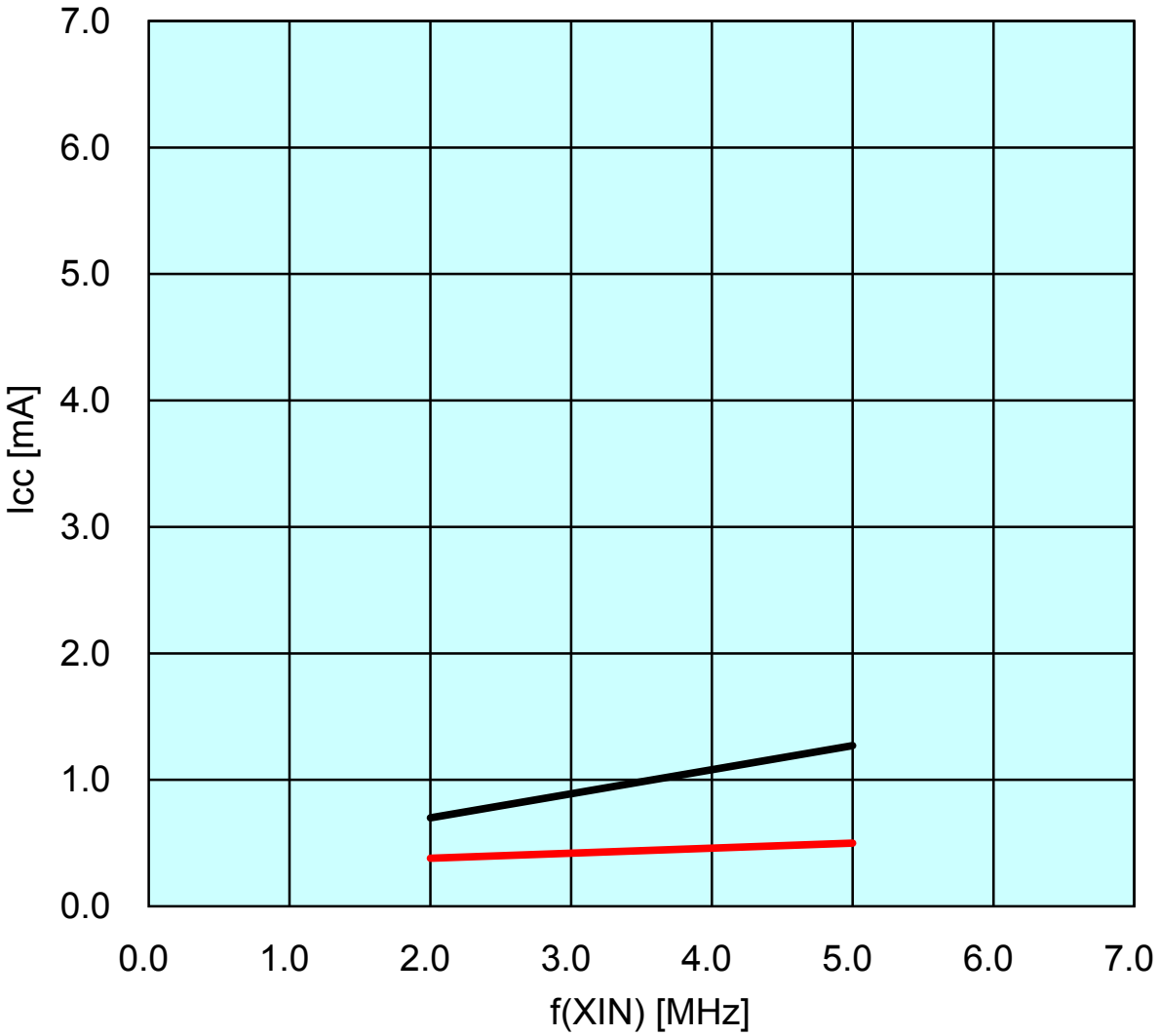


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs f(XIN)
(High-speed clock mode)

Prepared on Jun. 30,

R8C/33T Group
Vcc=1.8V
Topr=85degrees C
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Sensor Control Unit on

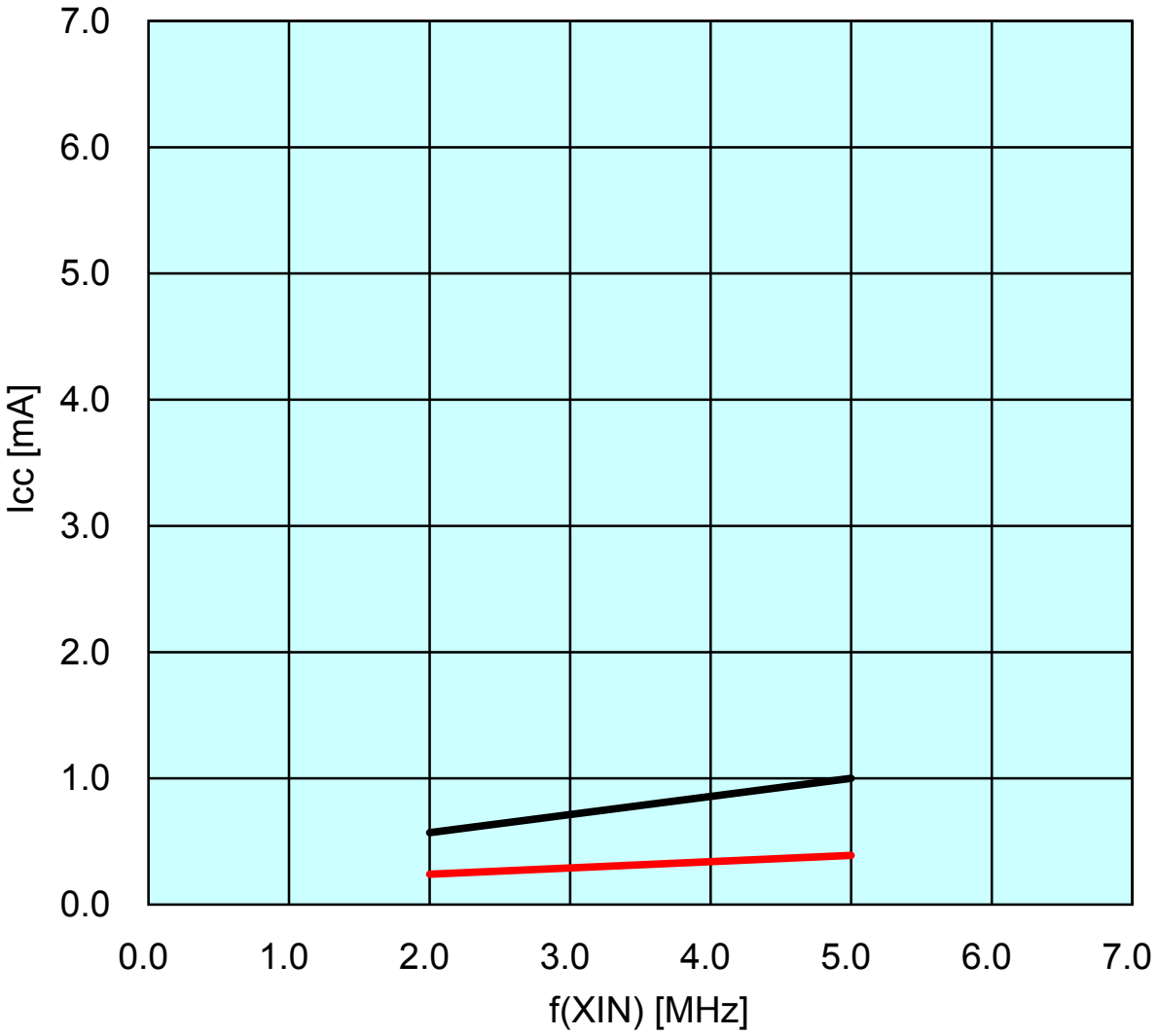


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs f(XIN)
(High-speed clock mode)

Prepared on Jun. 30,

R8C/33T Group
Vcc=1.8V
Topr=-40degrees C
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Sensor Control Unit on

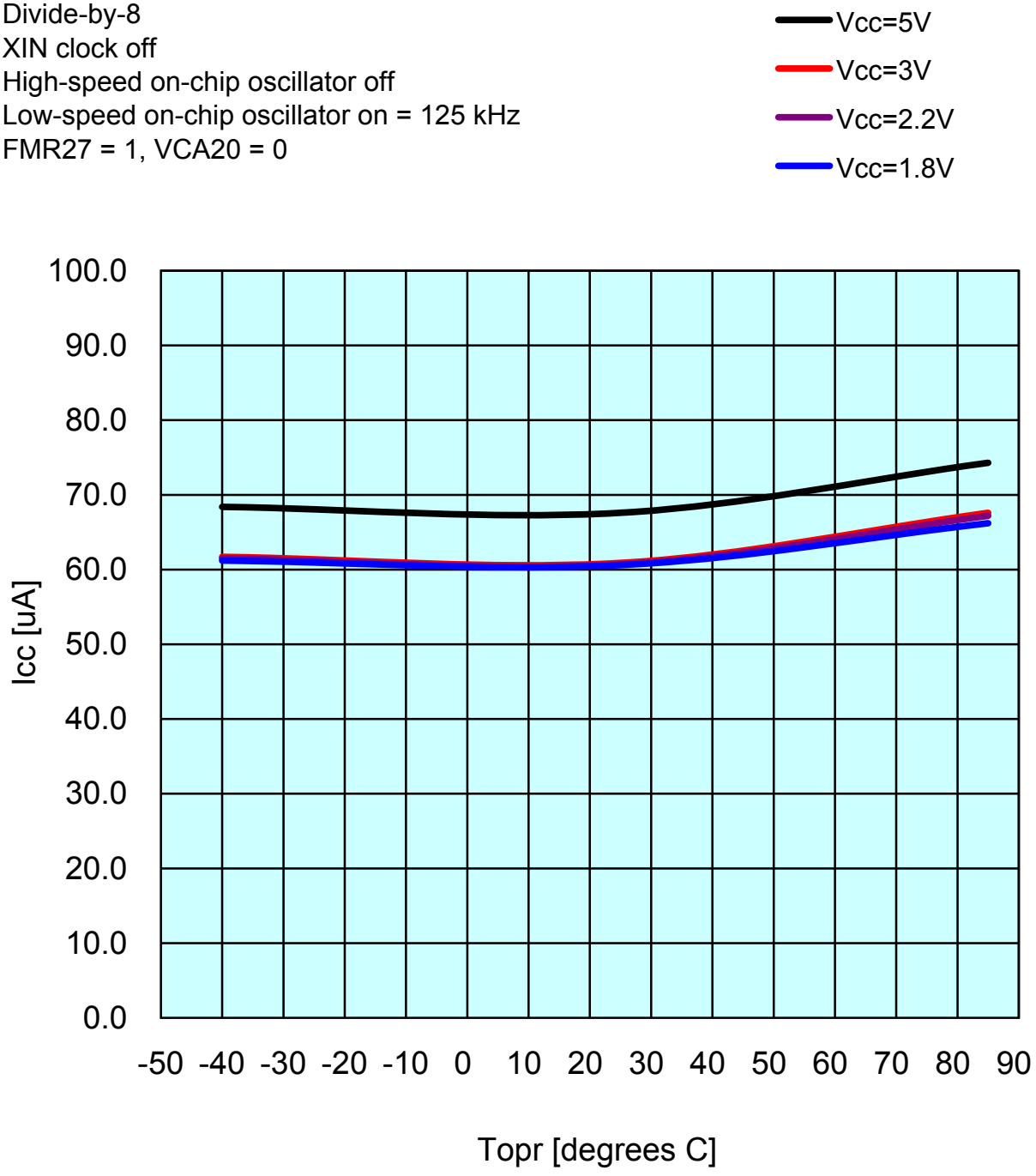


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Topr
(Low-Speed On-Chip Oscillator mode)

Prepared on Jun. 30, 2010

R8C/33T Group
Divide-by-8
XIN clock off
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
FMR27 = 1, VCA20 = 0

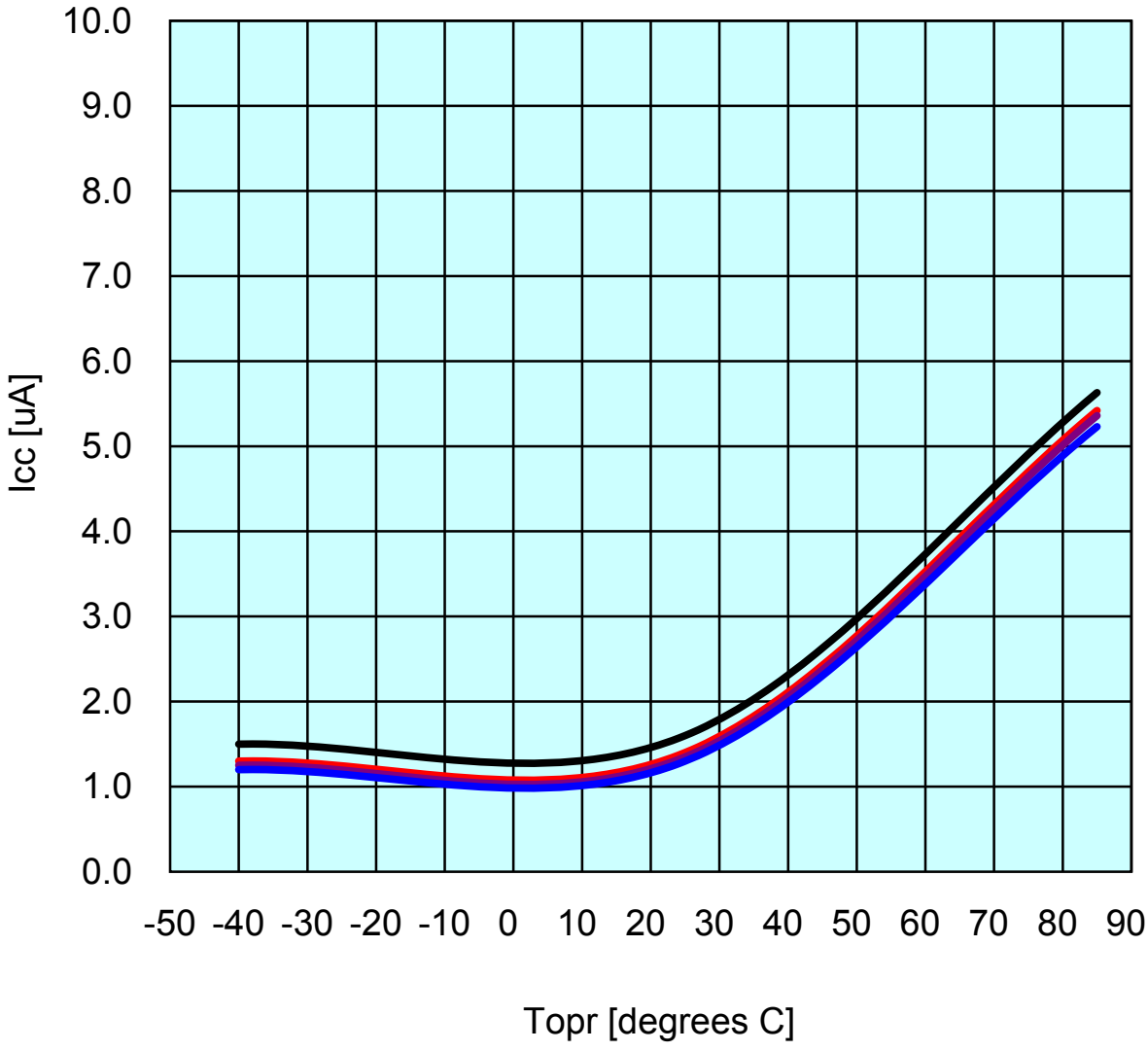


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Topr
(Stop mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock off
High-speed on-chip oscillator off
Low-speed on-chip oscillator off
CM10 = 1
Peripheral clock off
VCA27 = VCA26 = VCA25 = 0

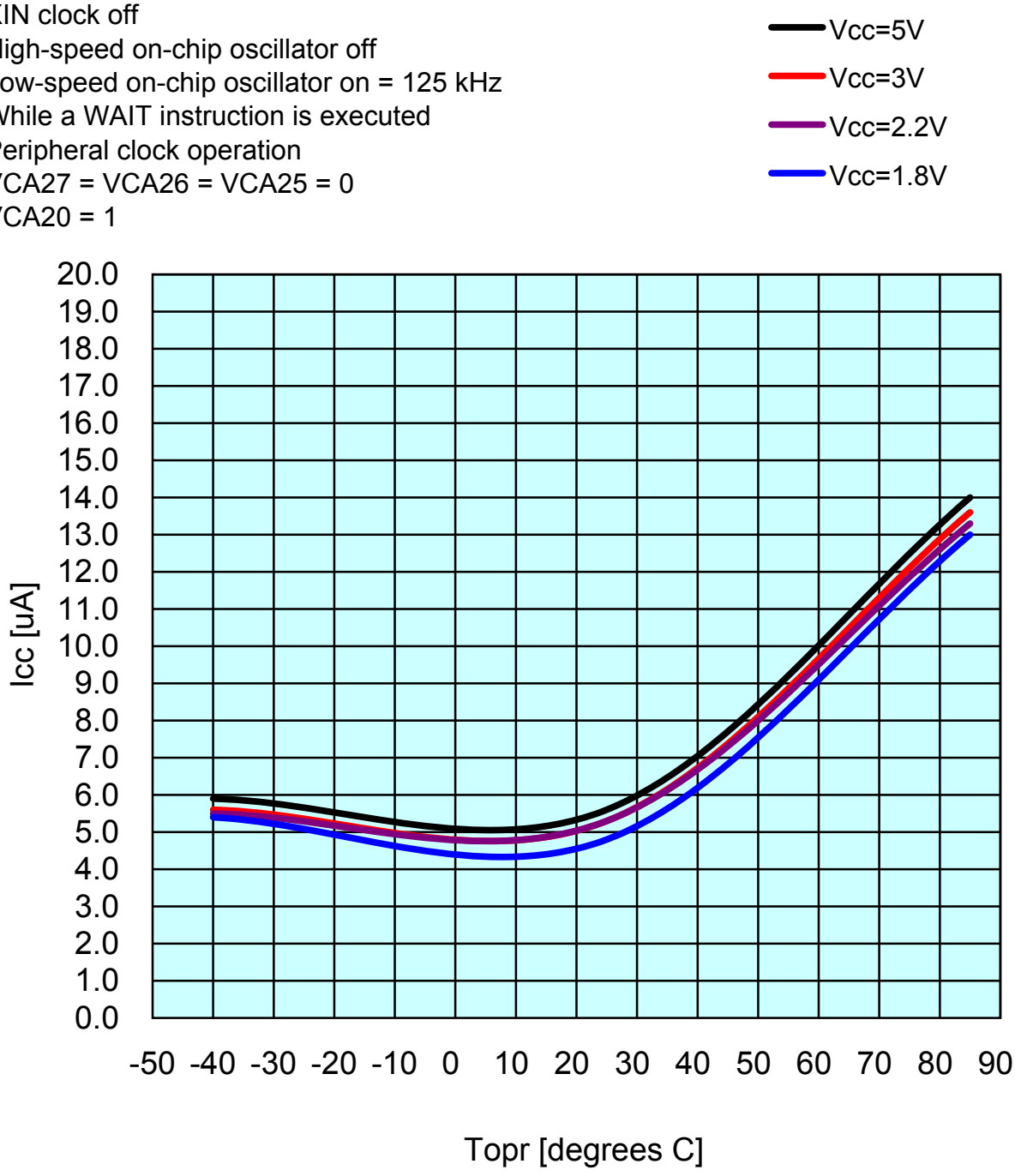


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Topr
(Wait mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock off
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
While a WAIT instruction is executed
Peripheral clock operation
VCA27 = VCA26 = VCA25 = 0
VCA20 = 1

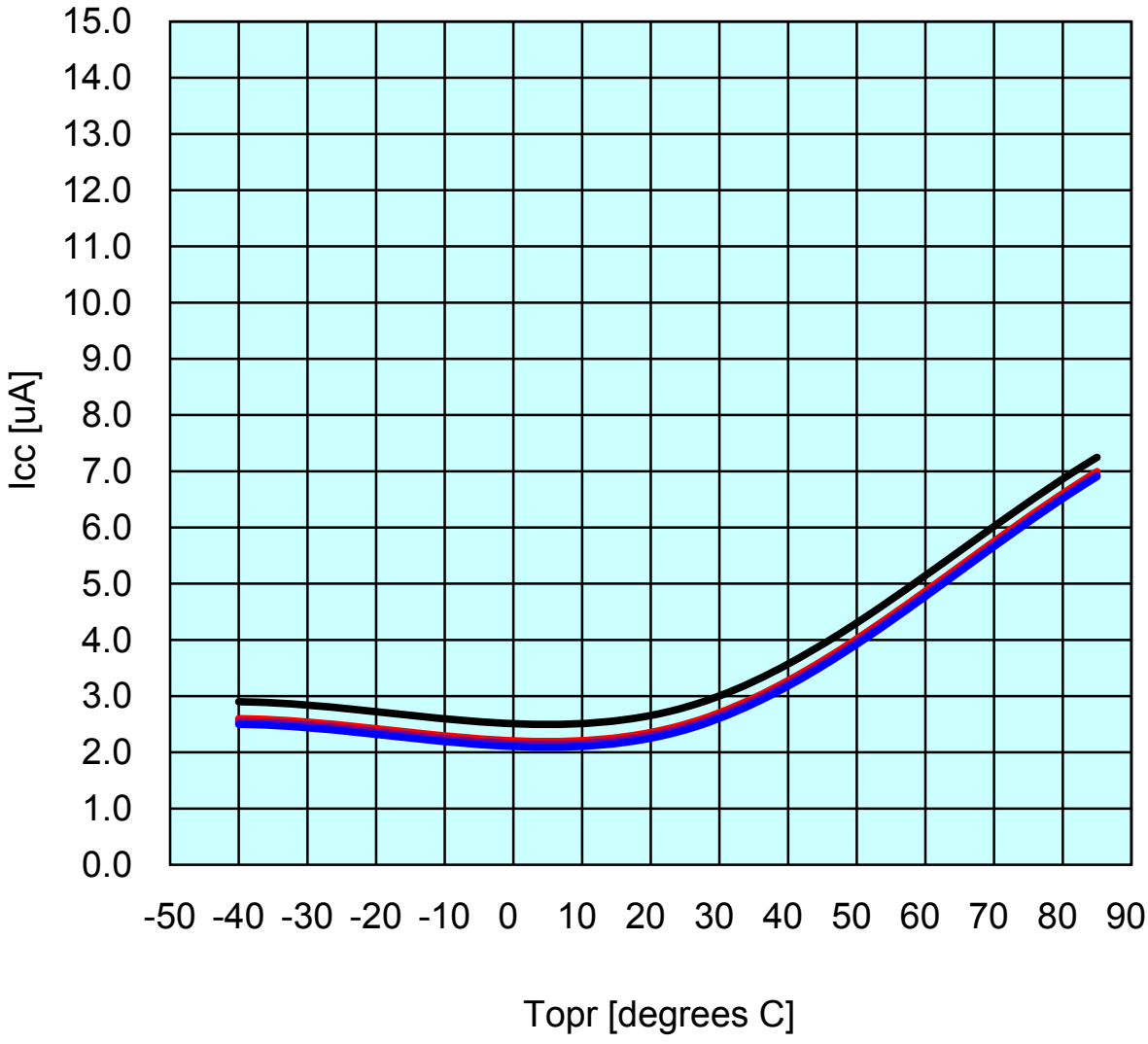


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Topr
(Wait mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock off
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
While a WAIT instruction is executed
Peripheral clock off
VCA27 = VCA26 = VCA25 = 0
VCA20 = 1

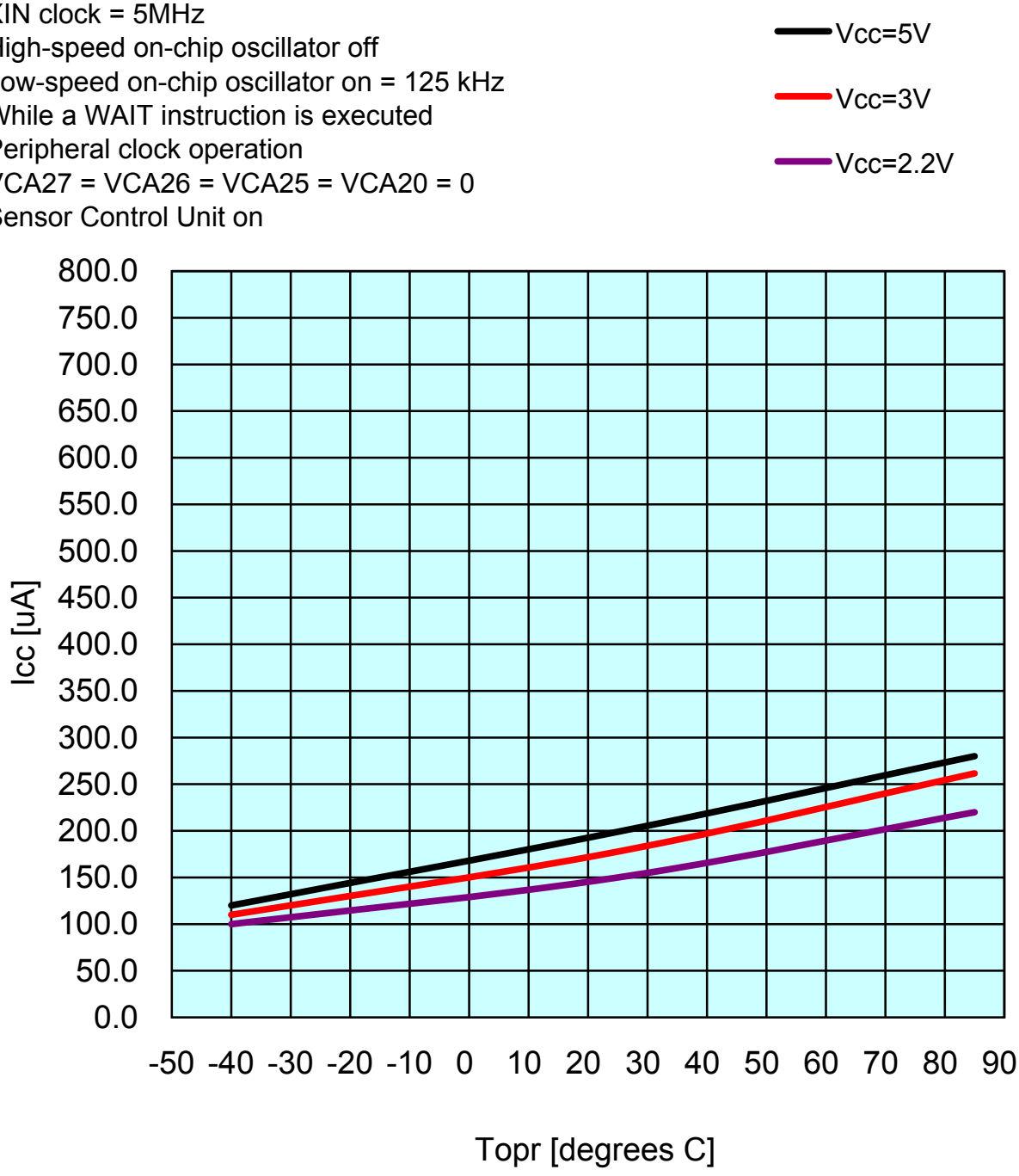


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Topr
(Wait mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock = 5MHz
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
While a WAIT instruction is executed
Peripheral clock operation
VCA27 = VCA26 = VCA25 = VCA20 = 0
Sensor Control Unit on

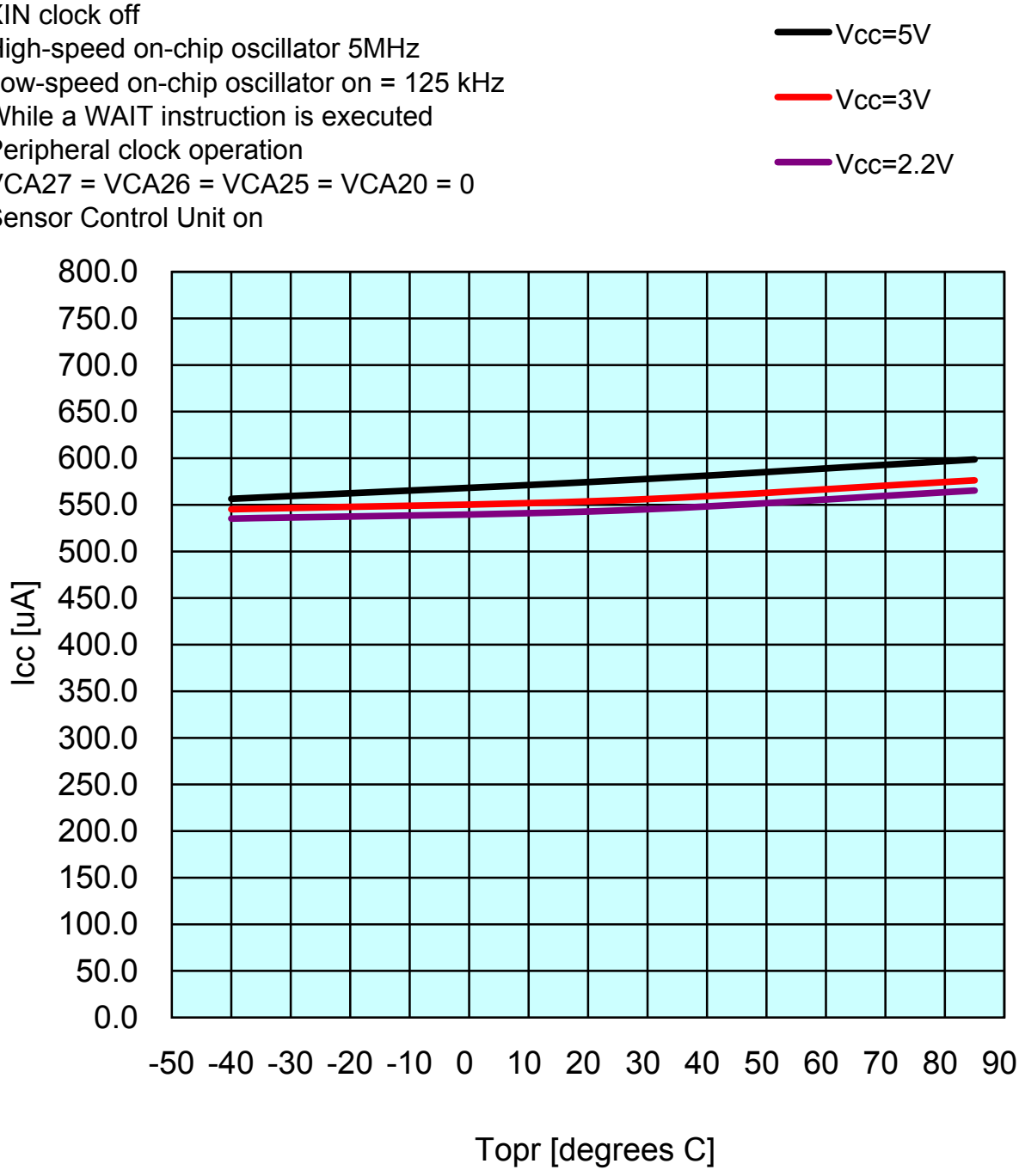


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Topr
(Wait mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock off
High-speed on-chip oscillator 5MHz
Low-speed on-chip oscillator on = 125 kHz
While a WAIT instruction is executed
Peripheral clock operation
VCA27 = VCA26 = VCA25 = VCA20 = 0
Sensor Control Unit on

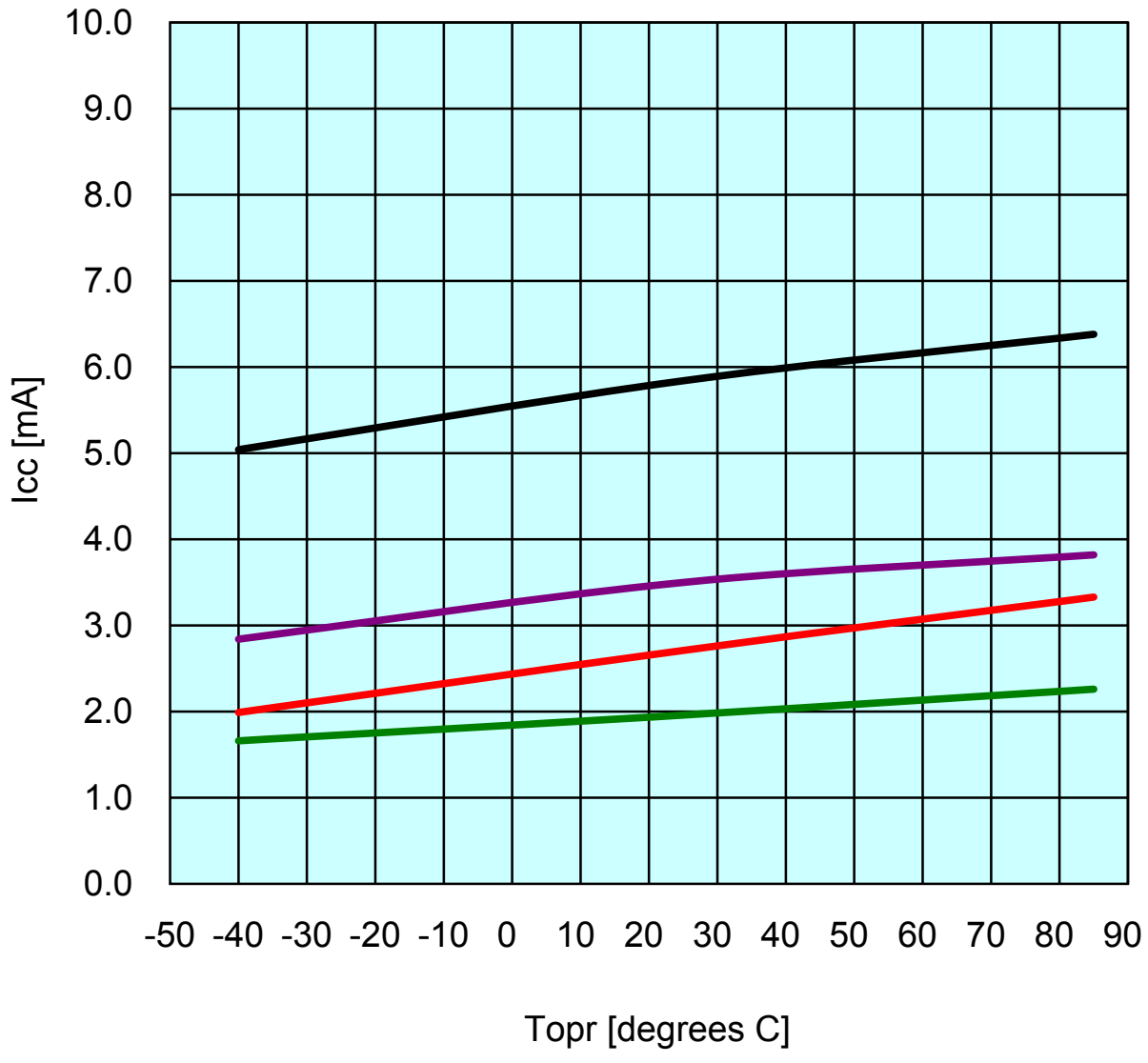


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Topr
(High-speed clock mode)

Prepared on Jun. 30, 2010

R8C/33T Group
Vcc=5V
XIN (square wave)
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Sensor Control Unit on

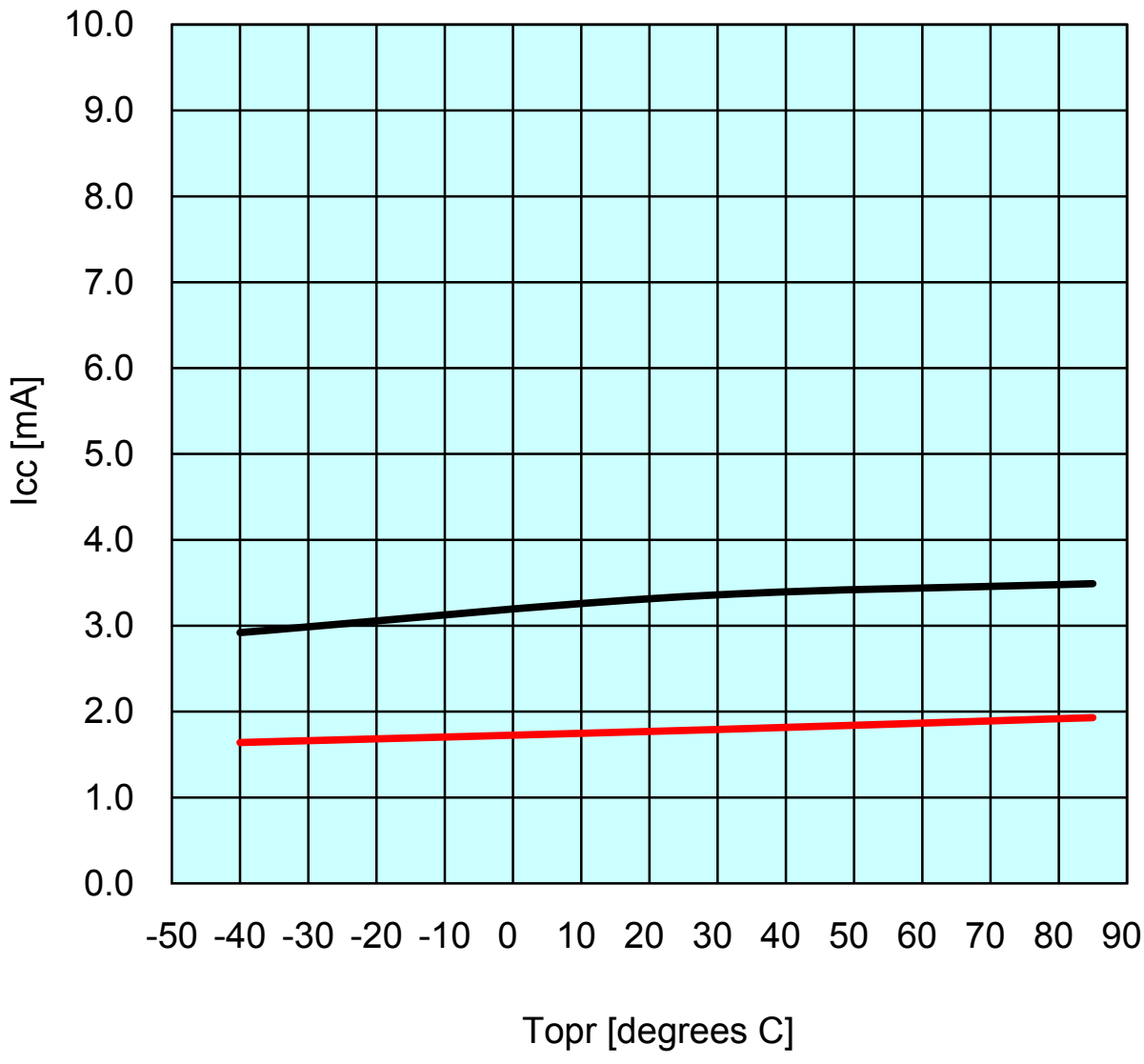


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Topr
(High-speed clock mode)

Prepared on Jun. 30, 2010

R8C/33T Group
Vcc=3V
XIN (square wave)
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Sensor Control Unit on

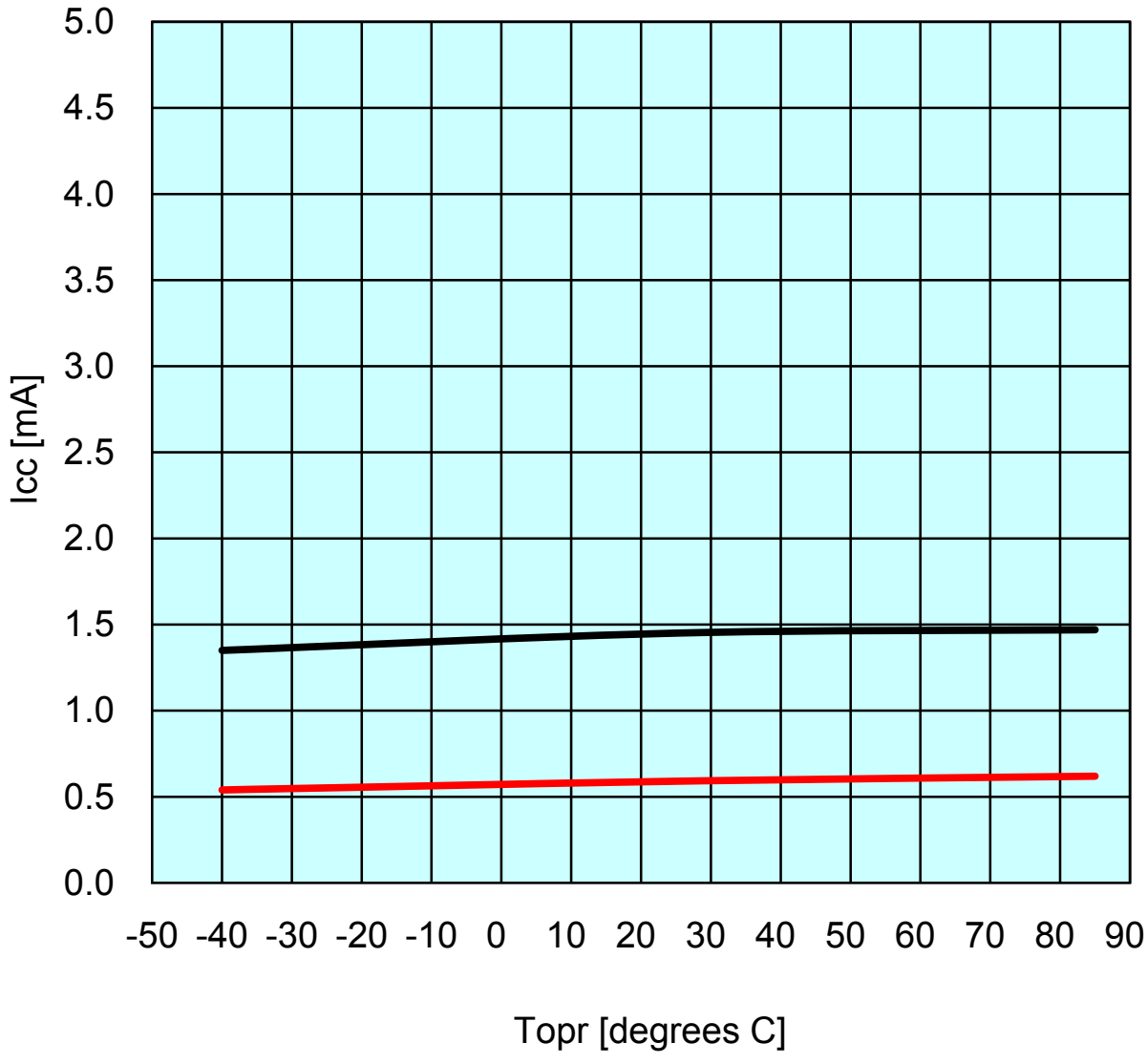


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Topr
(High-speed clock mode)

Prepared on Jun. 30, 2010

R8C/33T Group
Vcc=1.8V
XIN (square wave)
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Sensor Control Unit on

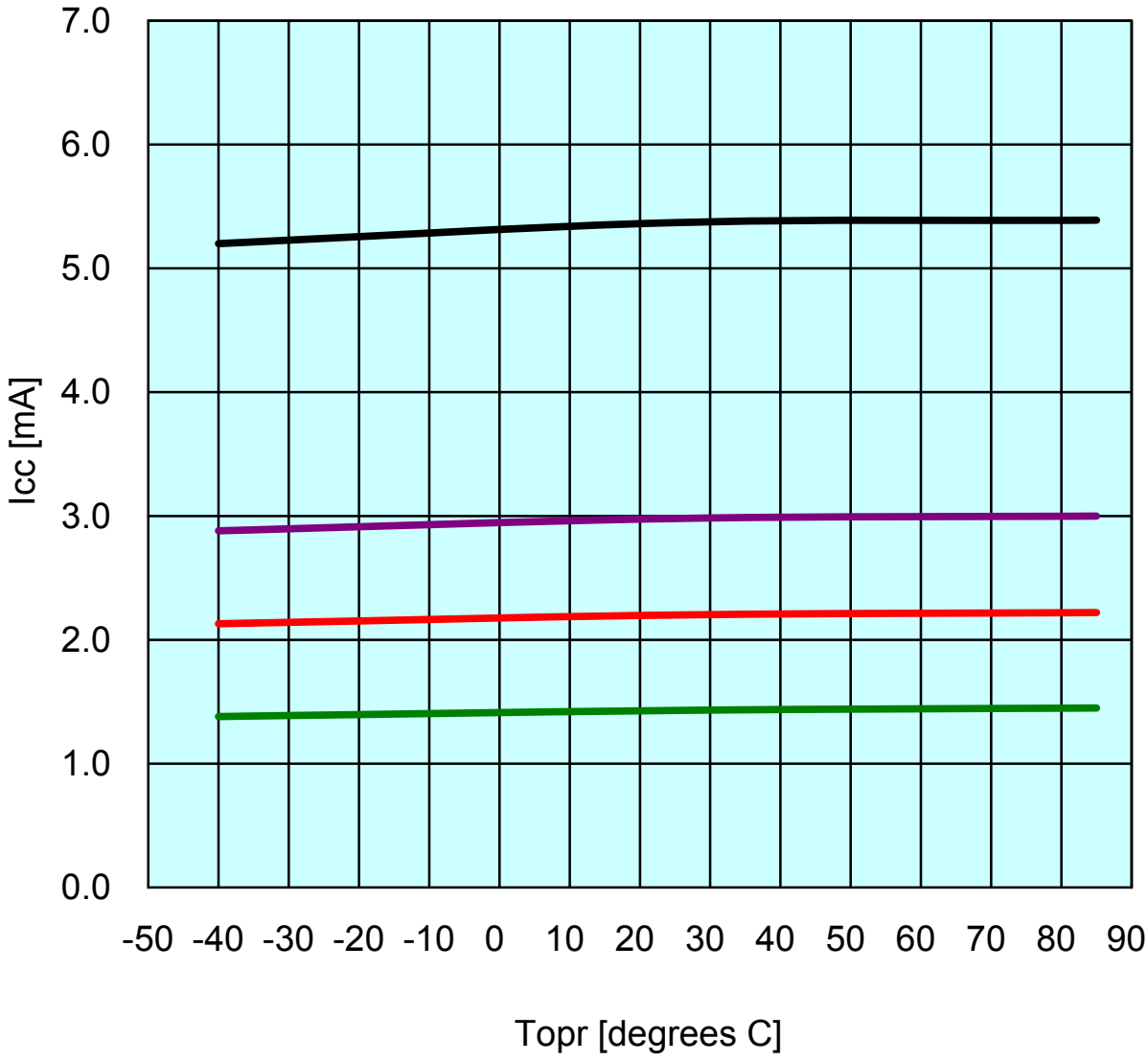


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Topr
(High-speed on-chip oscillator mode)

Prepared on Jun. 30, 2010

R8C/33T Group
Vcc=5V
XIN clock off
High-speed on-chip oscillator on
Low-speed on-chip oscillator on = 125 kHz
Sensor Control Unit on

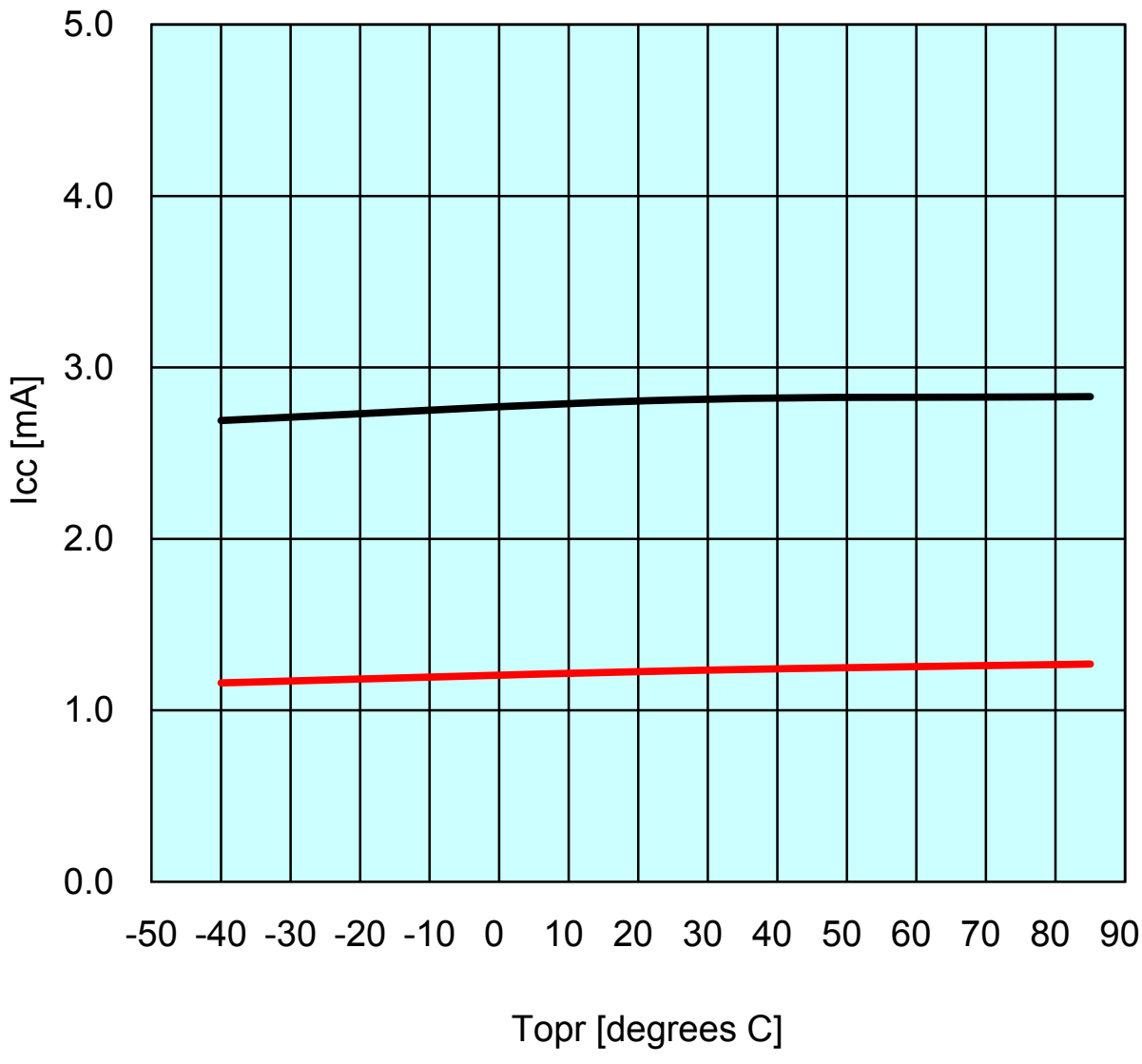


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Topr
(High-speed on-chip oscillator mode)

Prepared on Jun. 30, 2010

R8C/33T Group
Vcc=3V
XIN clock off
High-speed on-chip oscillator on
Low-speed on-chip oscillator on = 125 kHz
Sensor Control Unit on

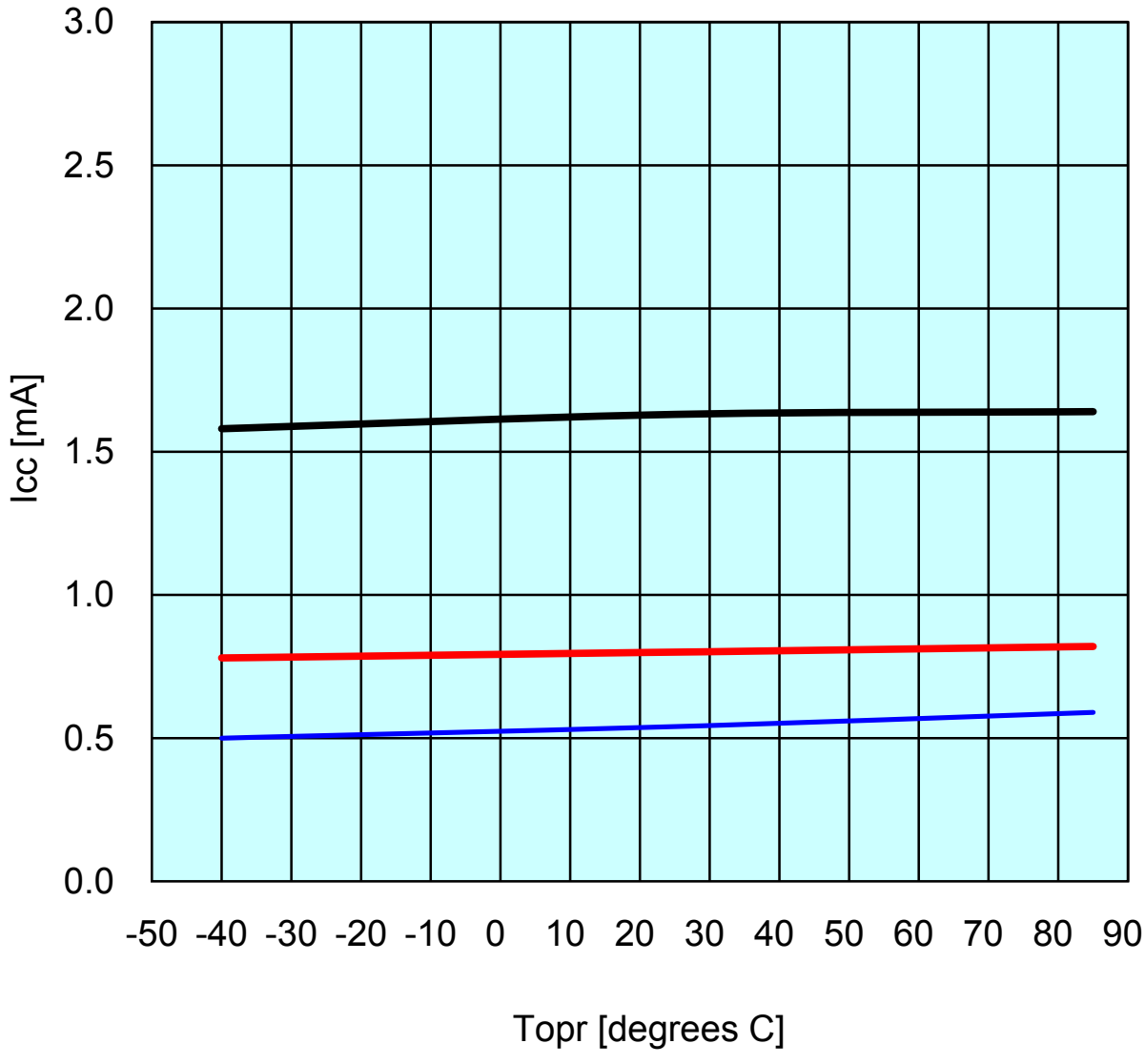


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Topr
(High-speed on-chip oscillator mode)

Prepared on Jun. 30, 2010

R8C/33T Group
Vcc=1.8V
XIN clock off
High-speed on-chip oscillator on
Low-speed on-chip oscillator on = 125 kHz
Sensor Control Unit on

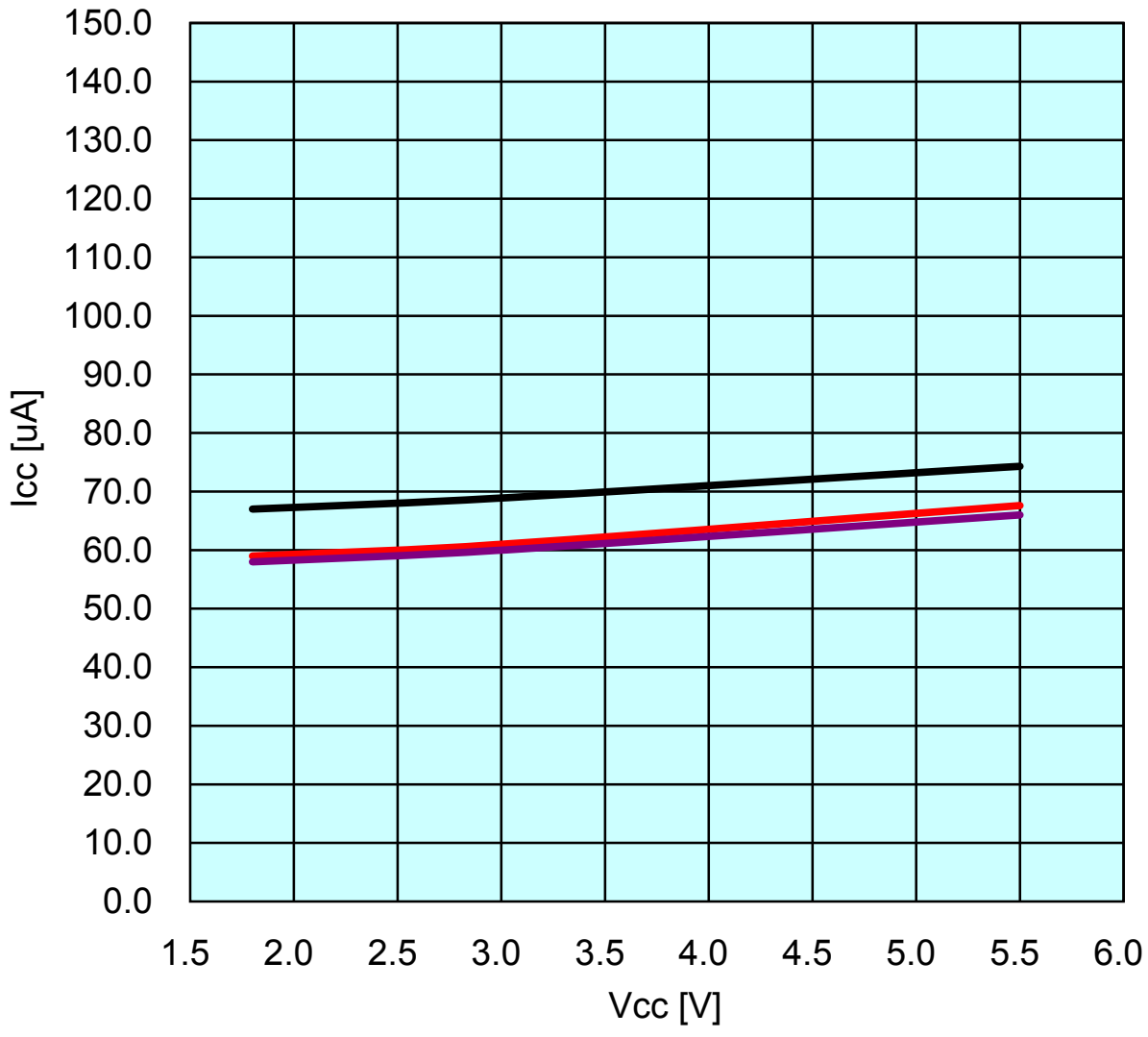


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(Low-Speed On-Chip Oscillator mode)

Prepared on Jun. 30, 2010

R8C/33T Group
Divide-by-8
XIN clock off
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
FMR27 = 1, VCA20 = 0

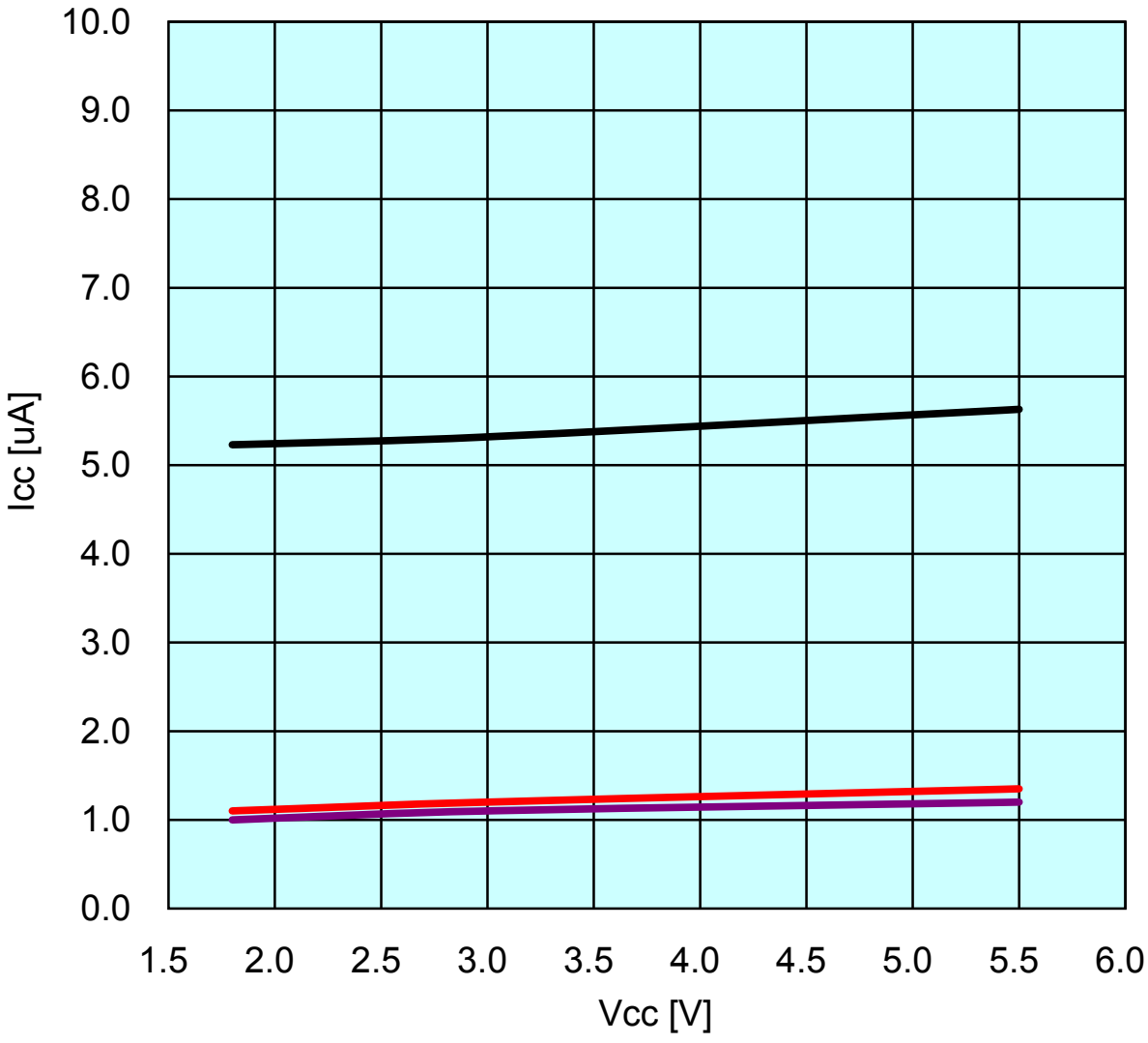


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(Stop mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock off
High-speed on-chip oscillator off
Low-speed on-chip oscillator off
CM10 = 1
Peripheral clock off
VCA27 = VCA26 = VCA25 = 0

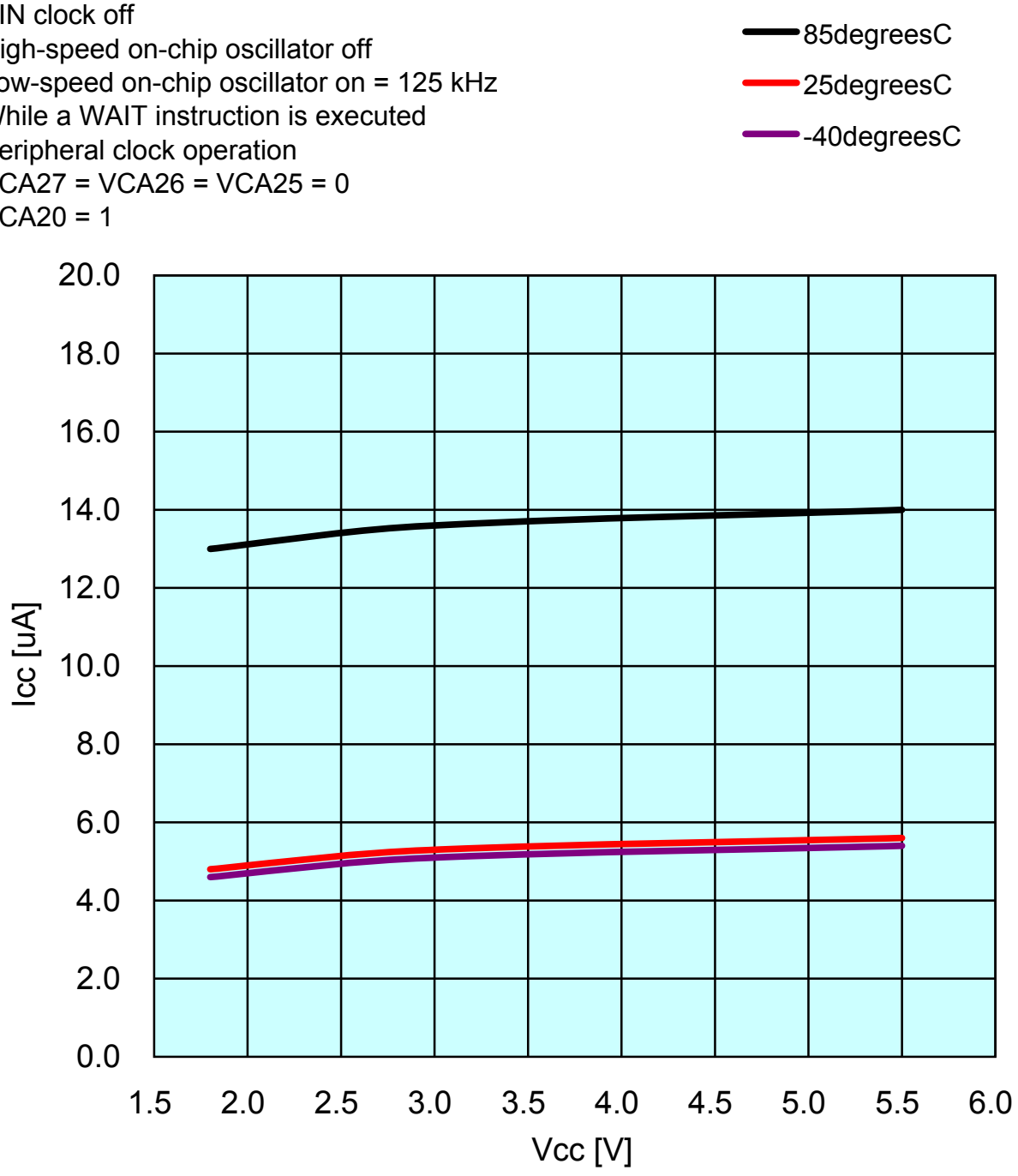


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(Wait mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock off
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
While a WAIT instruction is executed
Peripheral clock operation
VCA27 = VCA26 = VCA25 = 0
VCA20 = 1

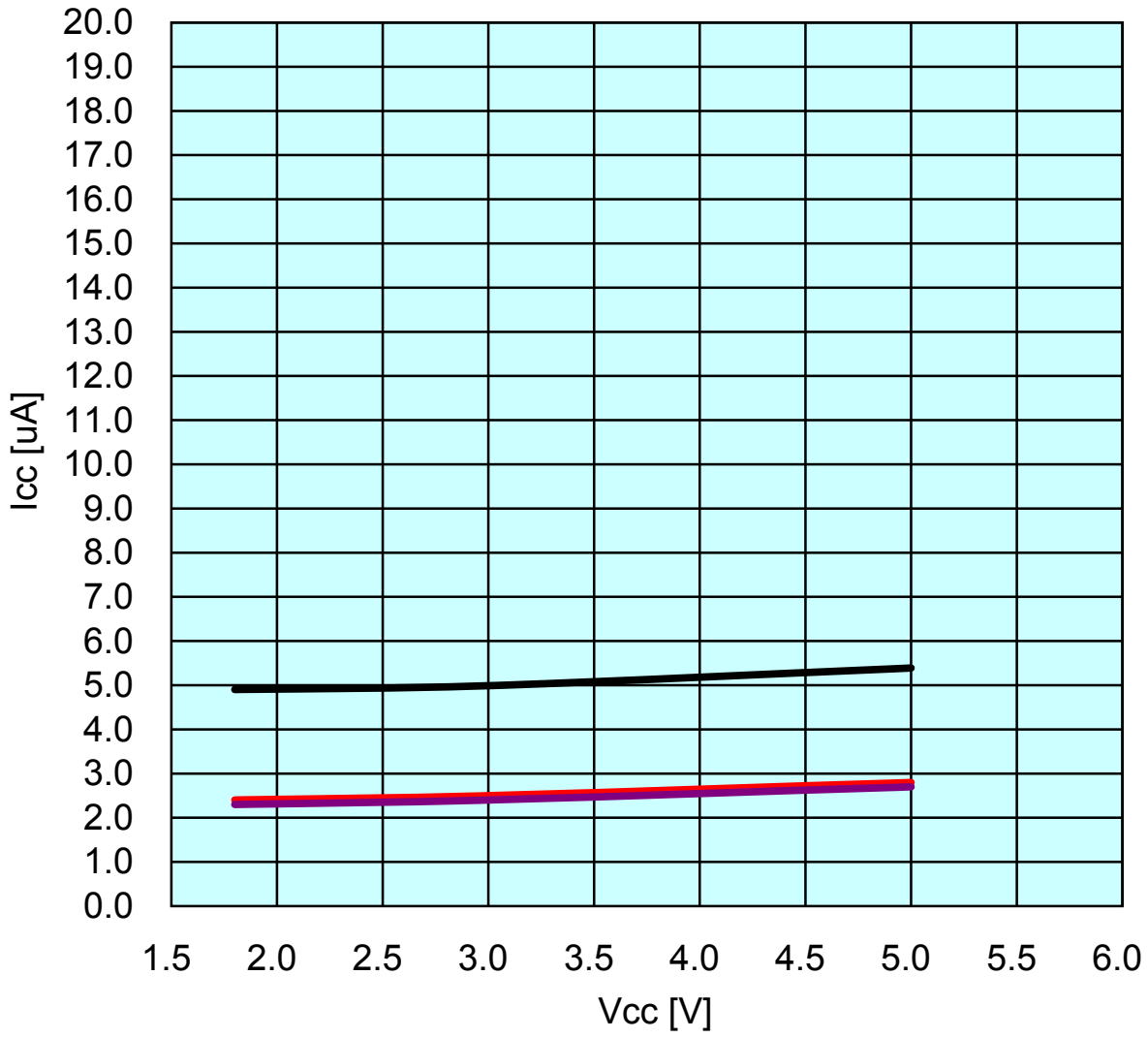


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(Wait mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock off
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
While a WAIT instruction is executed
Peripheral clock off
VCA27 = VCA26 = VCA25 = 0
VCA20 = 1

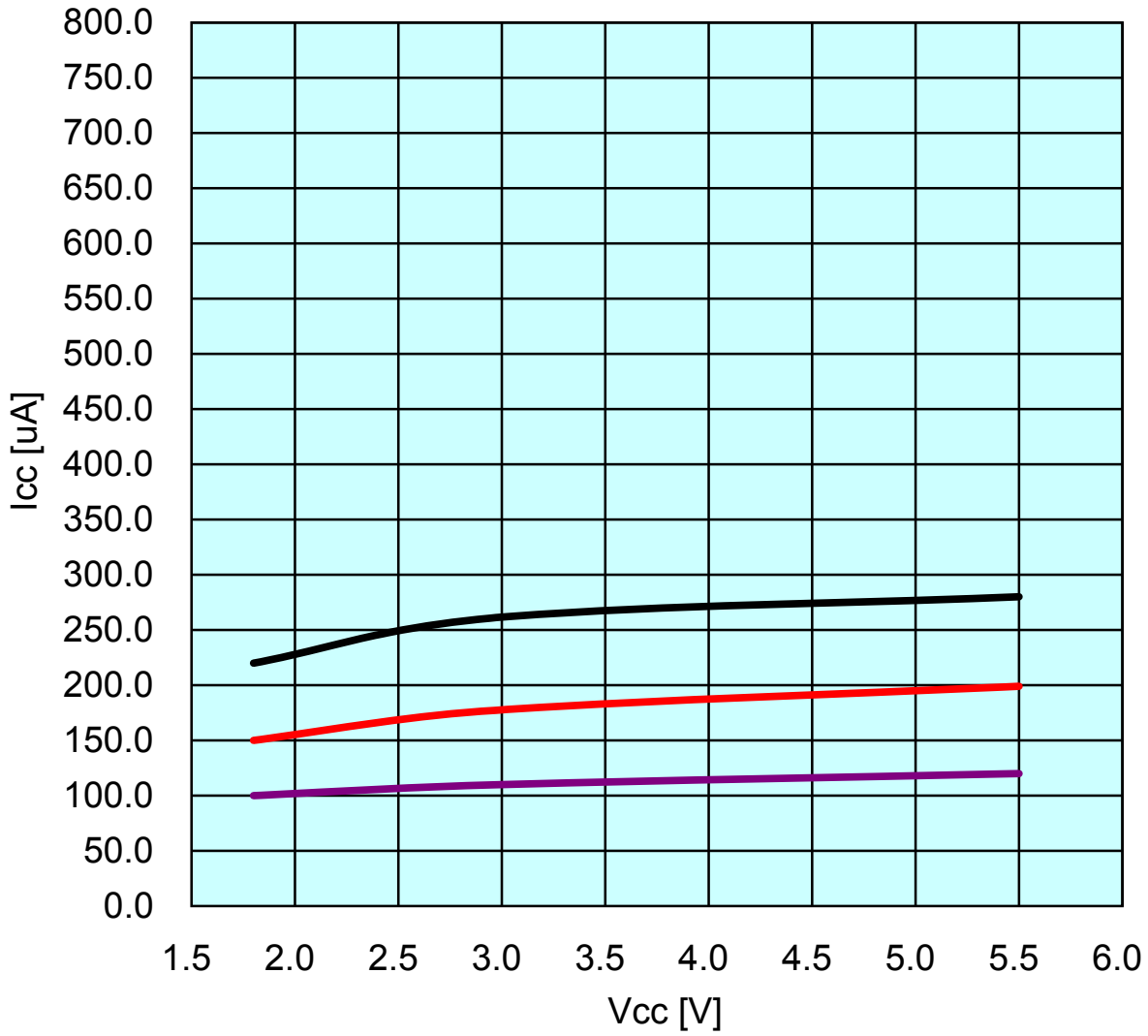


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(Wait mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock = 5MHz
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
While a WAIT instruction is executed
Peripheral clock operation = 5MHz
VCA27 = VCA26 = VCA25 = VCA20 = 0
Sensor Control Unit on

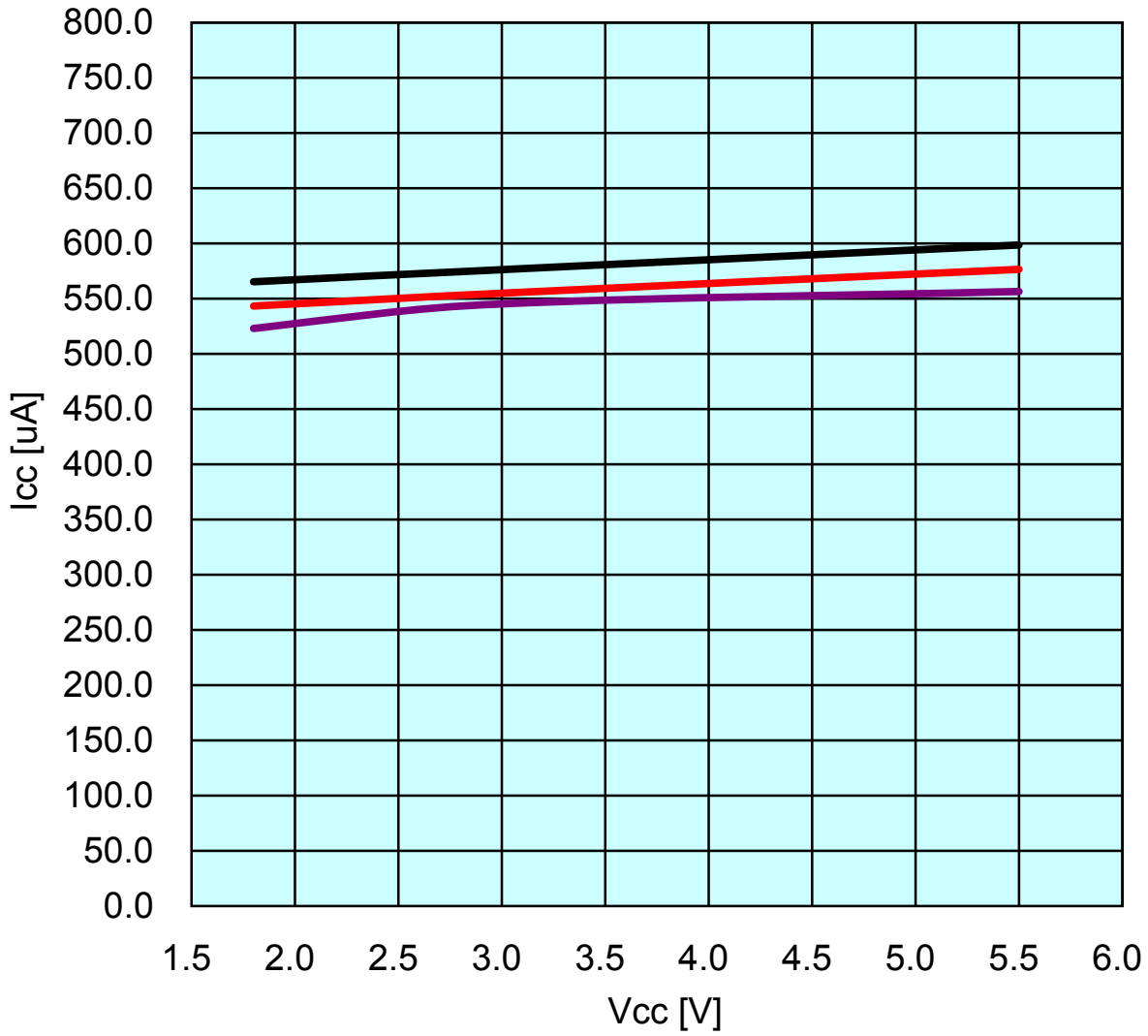


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(Wait mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock off
High-speed on-chip oscillator = 5MHz
Low-speed on-chip oscillator on = 125 kHz
While a WAIT instruction is executed
Peripheral clock operation = 5MHz
VCA27 = VCA26 = VCA25 = VCA20 = 0
Sensor Control Unit on

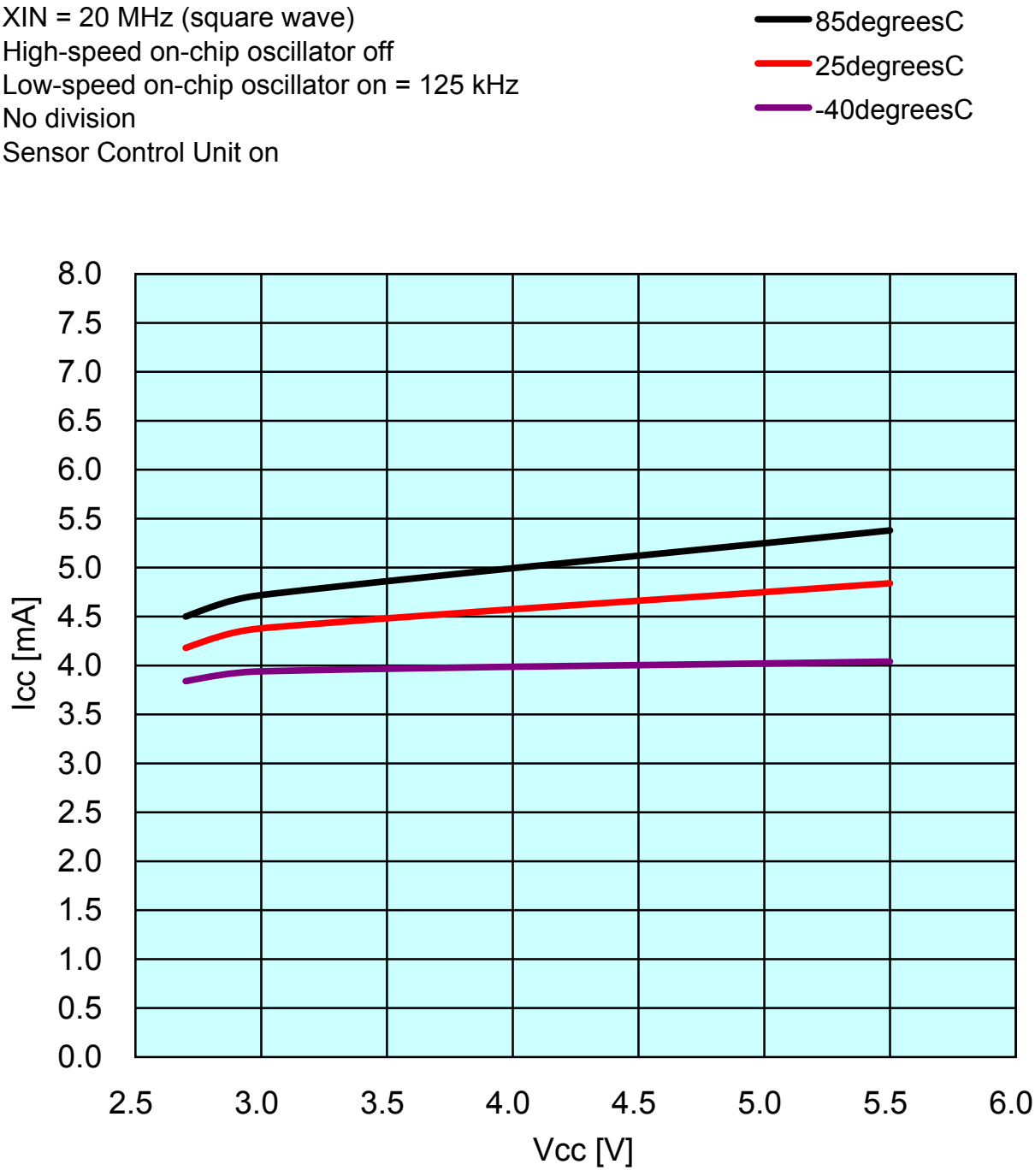


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(High-speed clock mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN = 20 MHz (square wave)
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
No division
Sensor Control Unit on

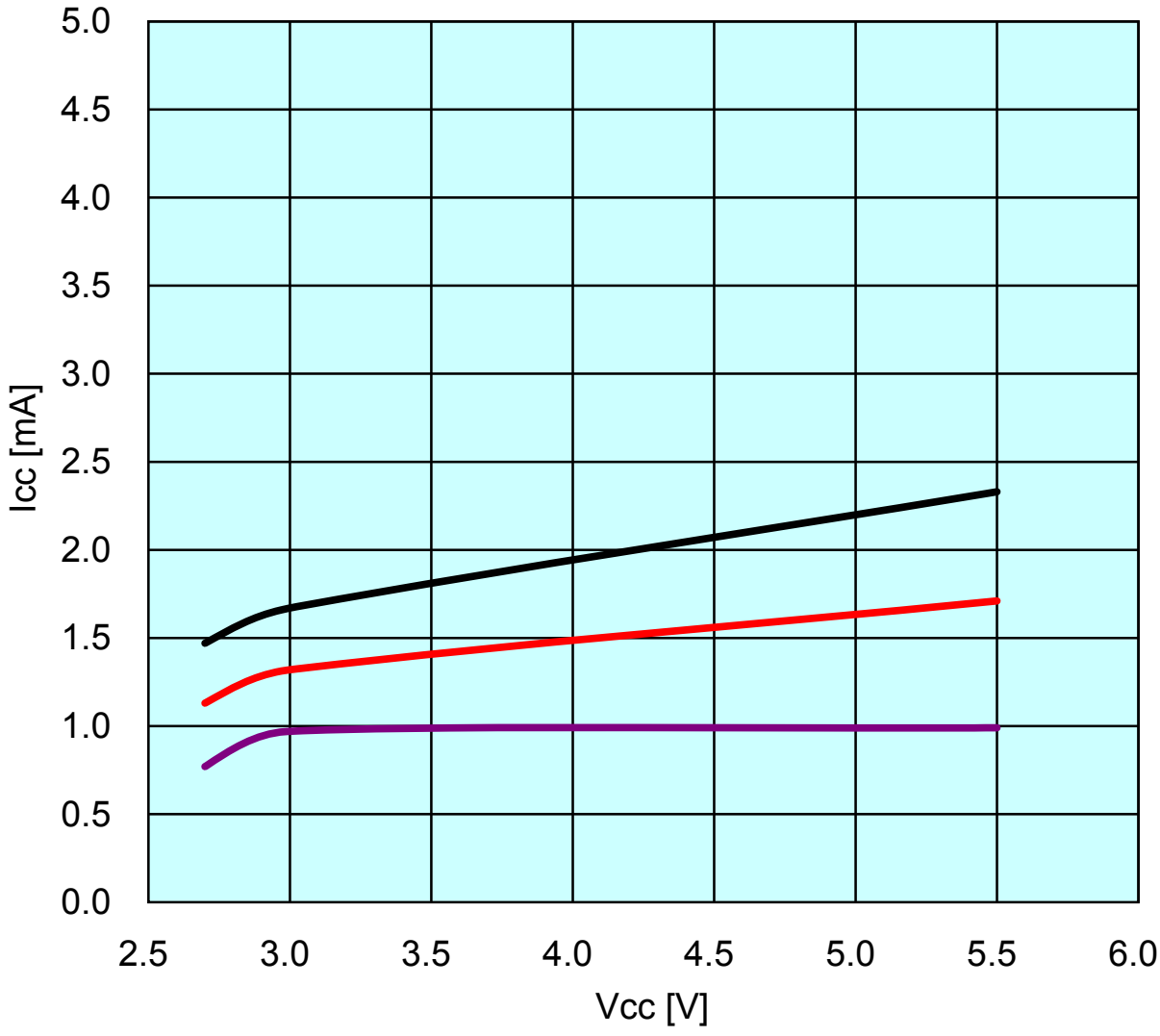


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(High-speed clock mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN = 20 MHz (square wave)
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Divide-by-8
Sensor Control Unit on

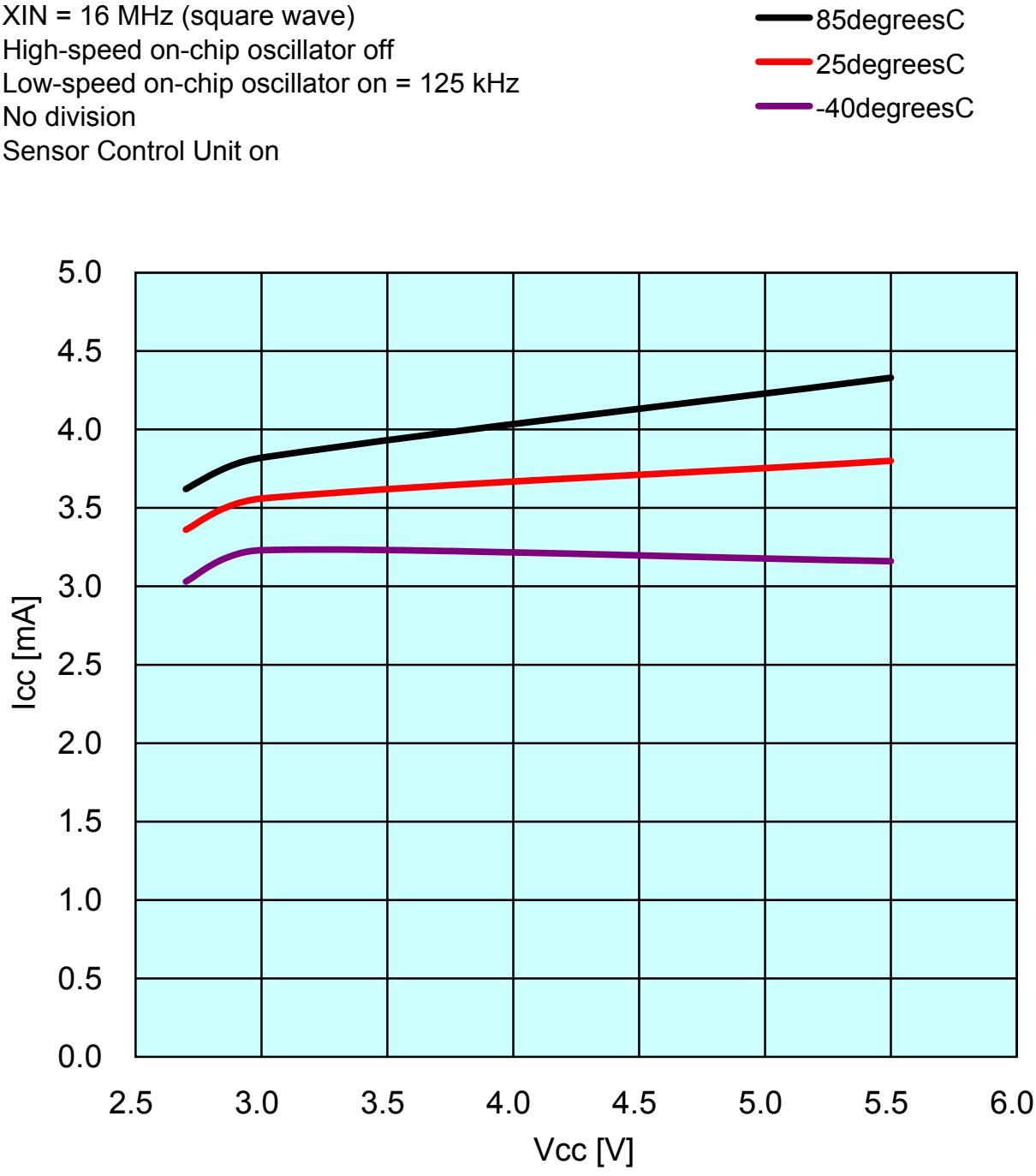


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(High-speed clock mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN = 16 MHz (square wave)
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
No division
Sensor Control Unit on

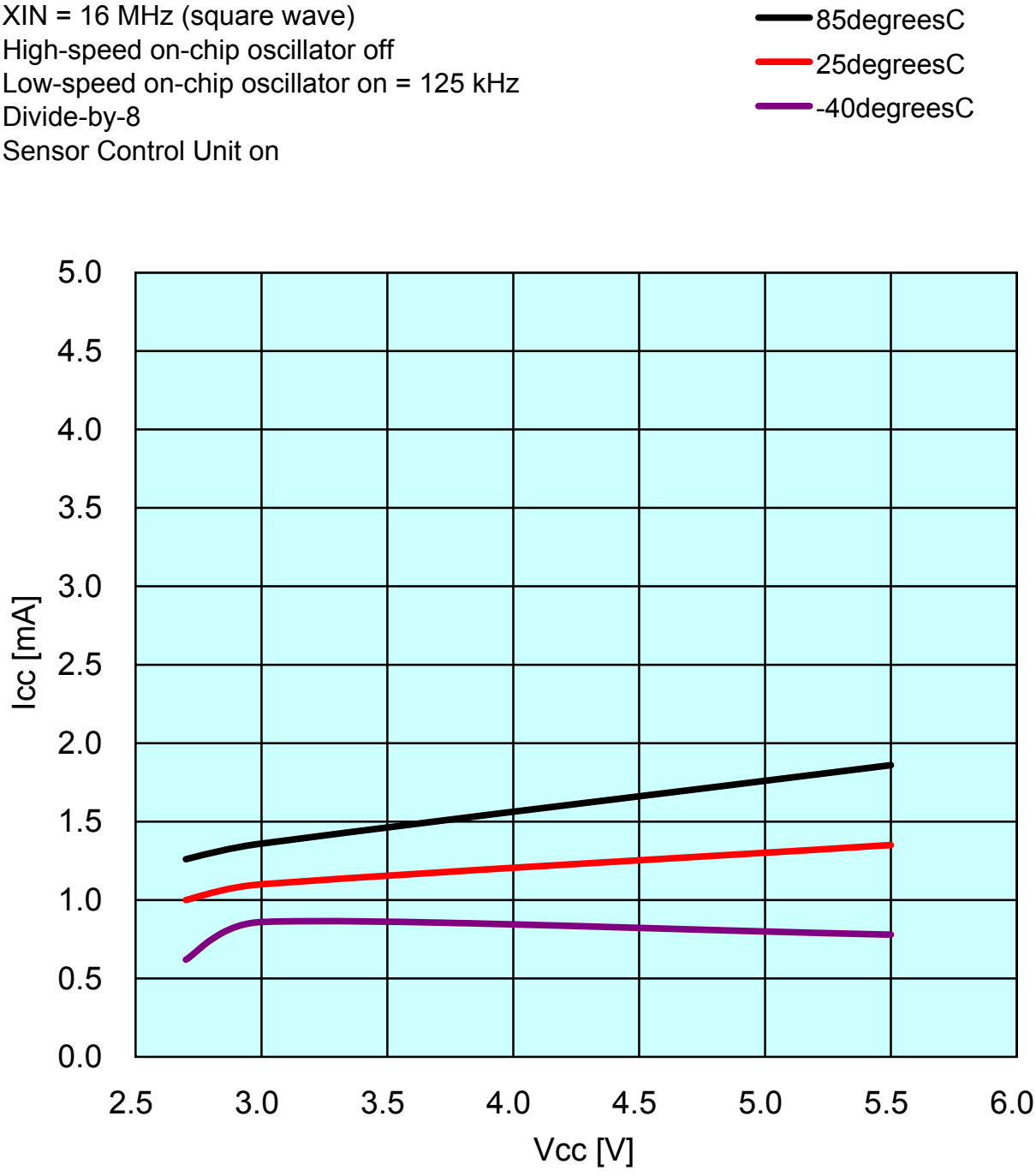


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(High-speed clock mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN = 16 MHz (square wave)
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Divide-by-8
Sensor Control Unit on

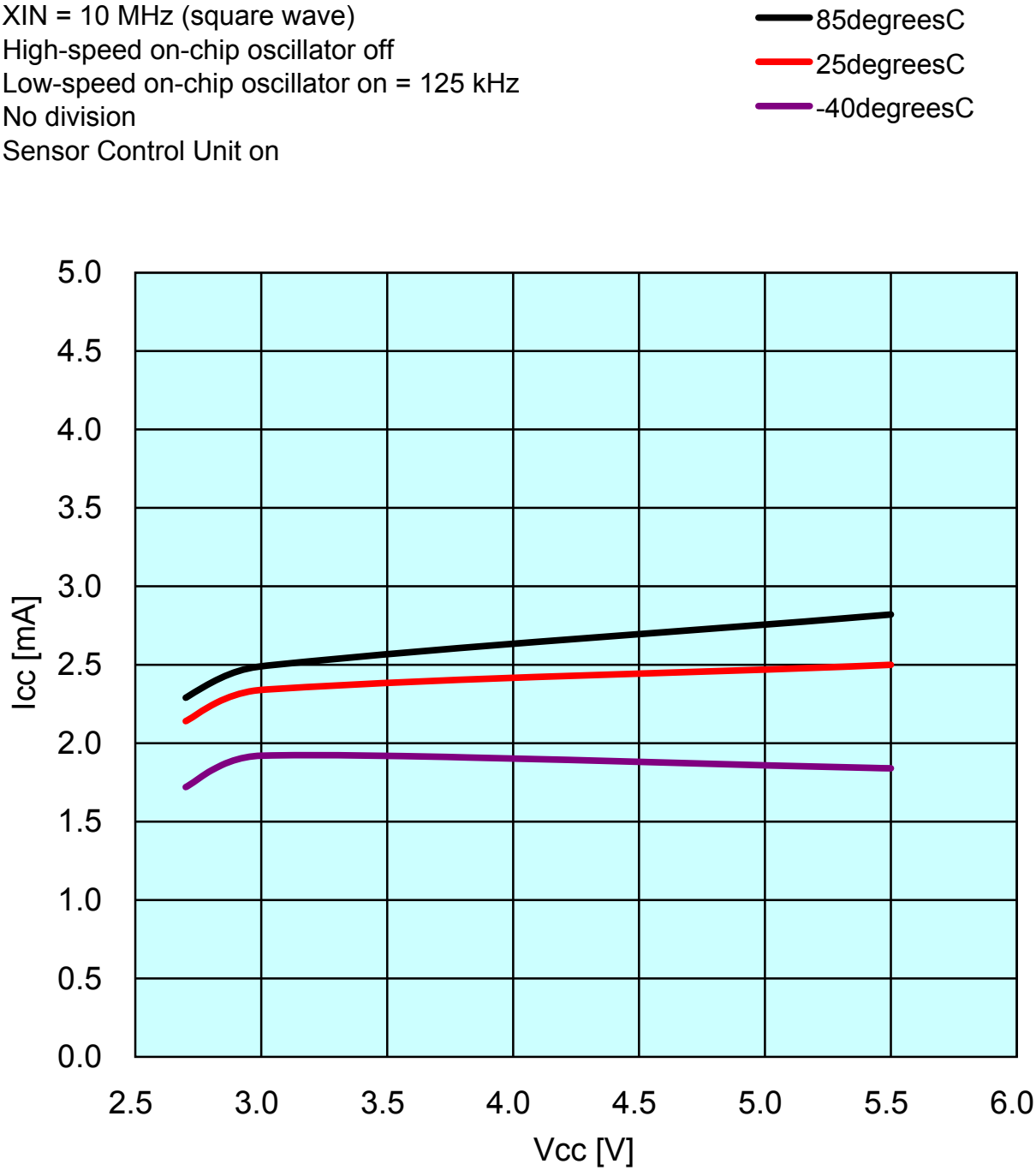


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(High-speed clock mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN = 10 MHz (square wave)
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
No division
Sensor Control Unit on

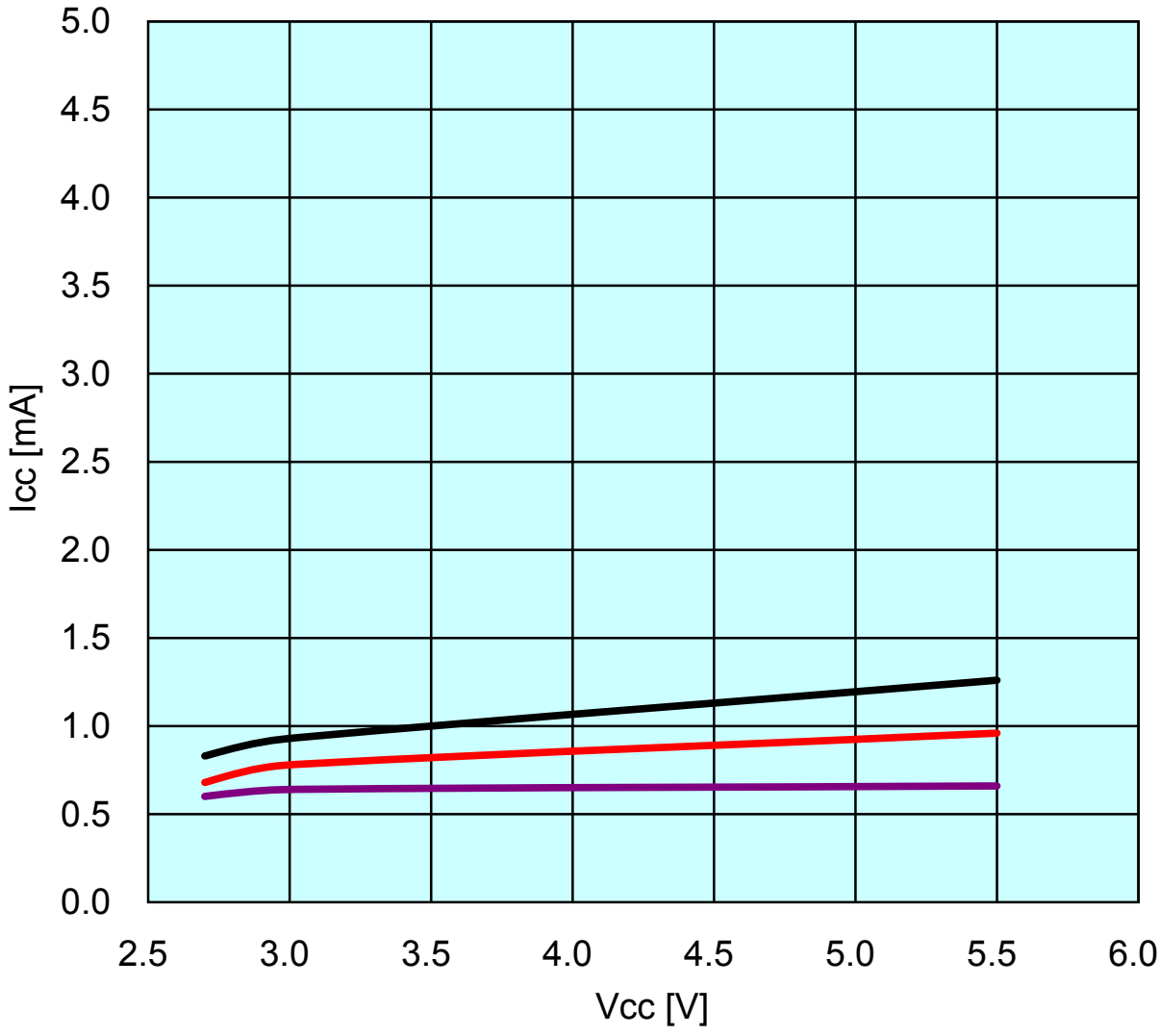


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(High-speed clock mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN = 10MHz (square wave)
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Divide-by-8
Sensor Control Unit on

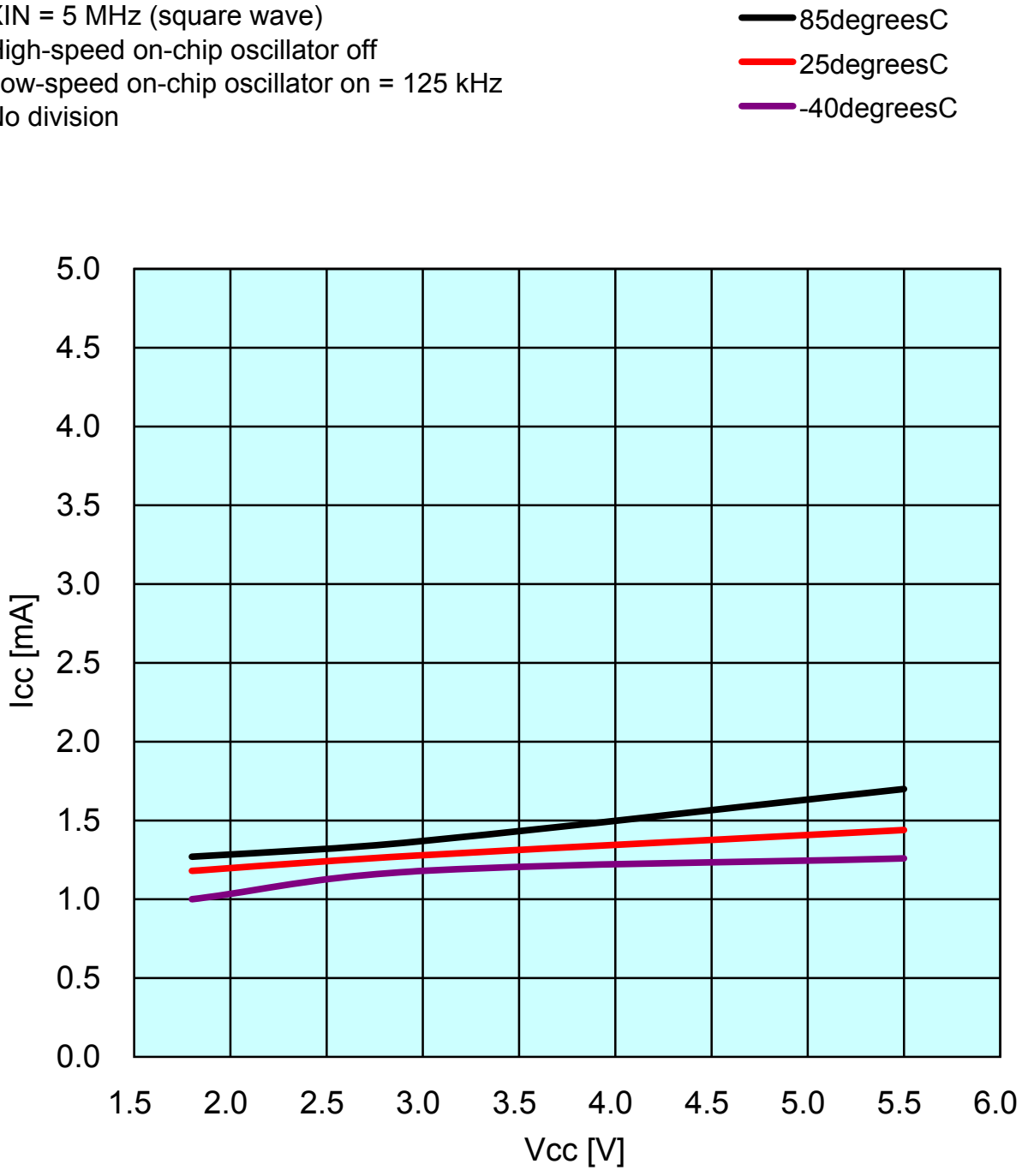


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(High-speed clock mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN = 5 MHz (square wave)
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
No division

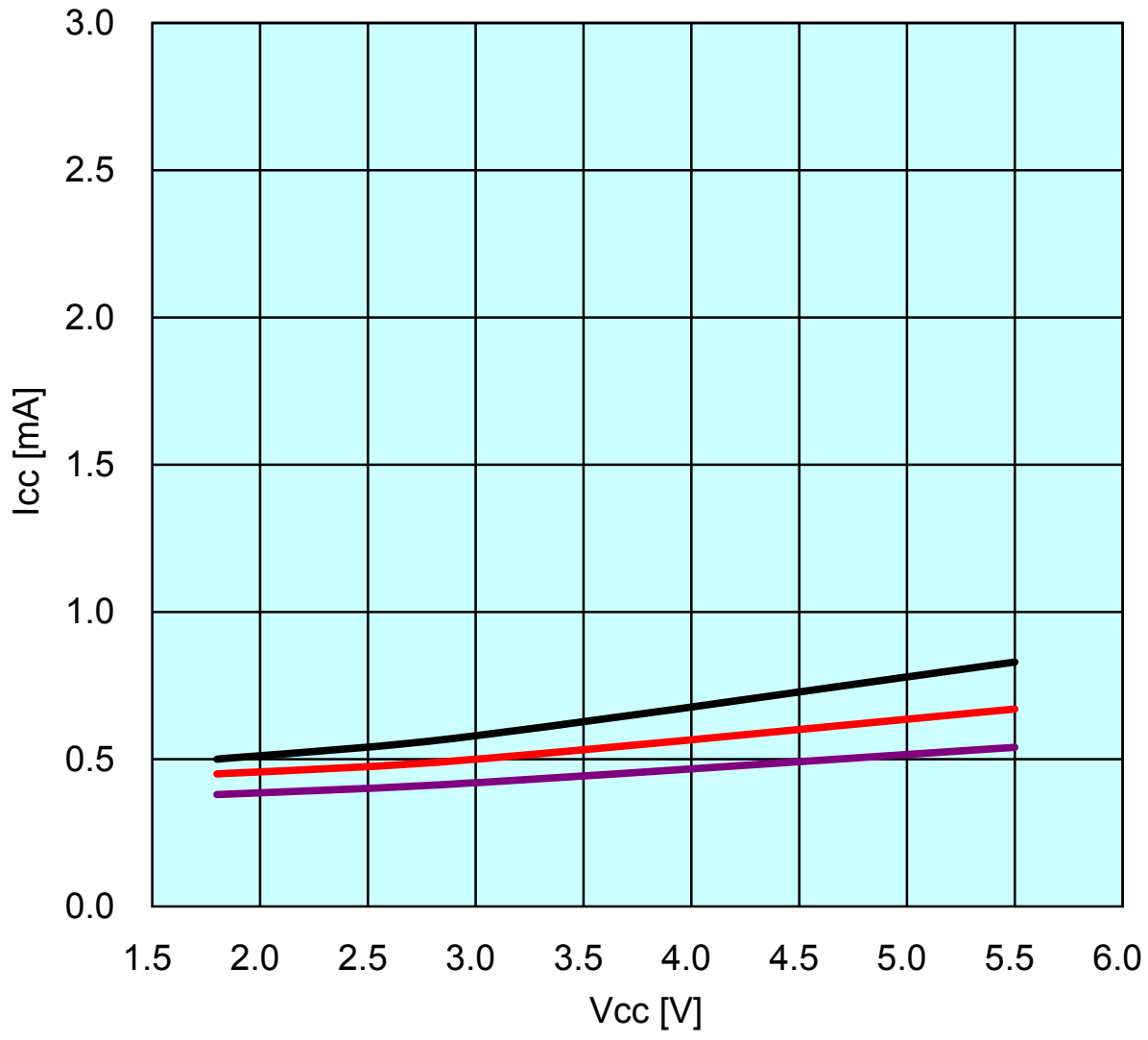


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(High-speed clock mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN = 5 MHz (square wave)
High-speed on-chip oscillator off
Low-speed on-chip oscillator on = 125 kHz
Divide-by-8
Sensor Control Unit on

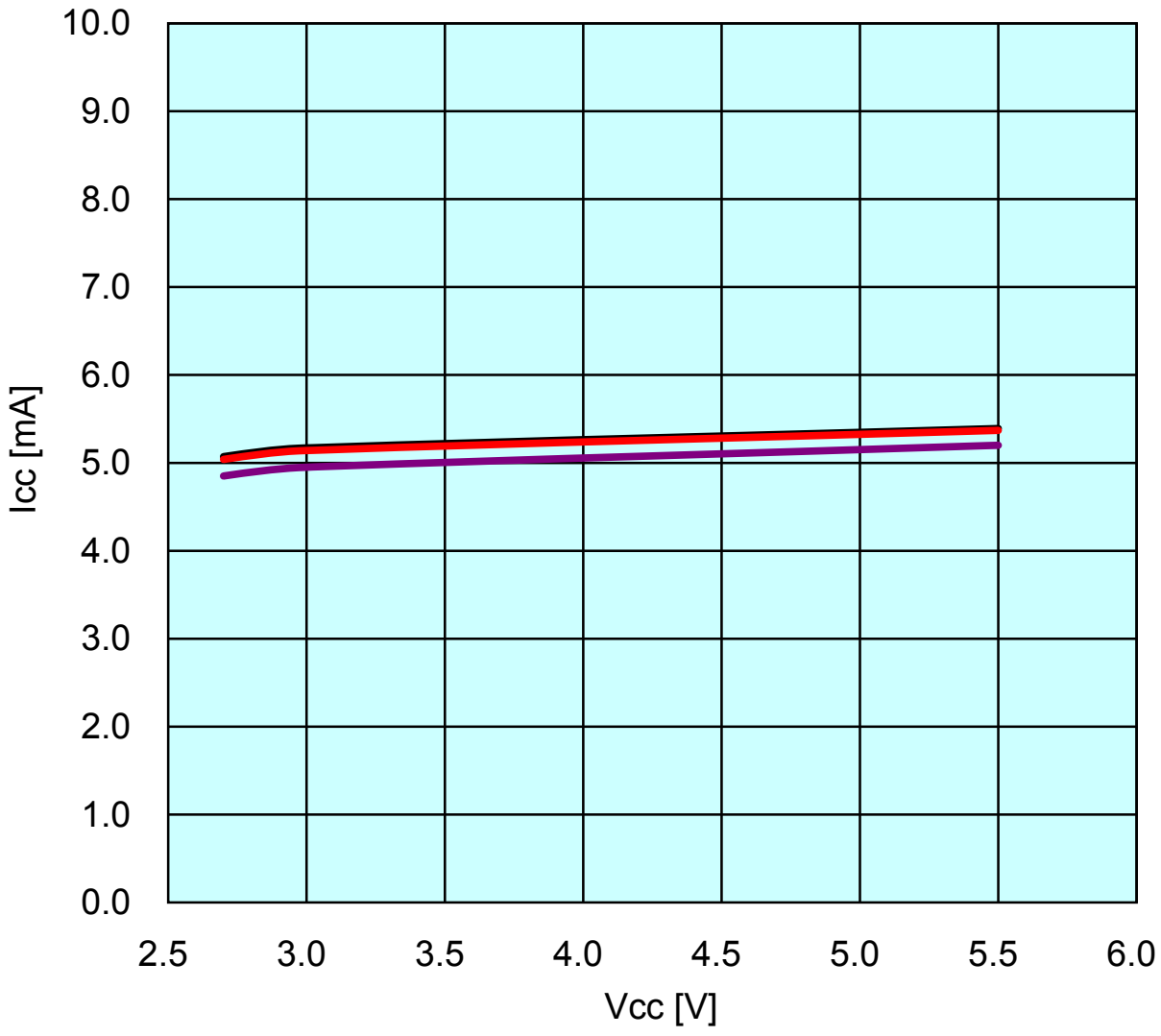


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(High-speed on-chip oscillator mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock off
High-speed on-chip oscillator on = 20MHz
Low-speed on-chip oscillator on = 125 kHz
No division
Sensor Control Unit on

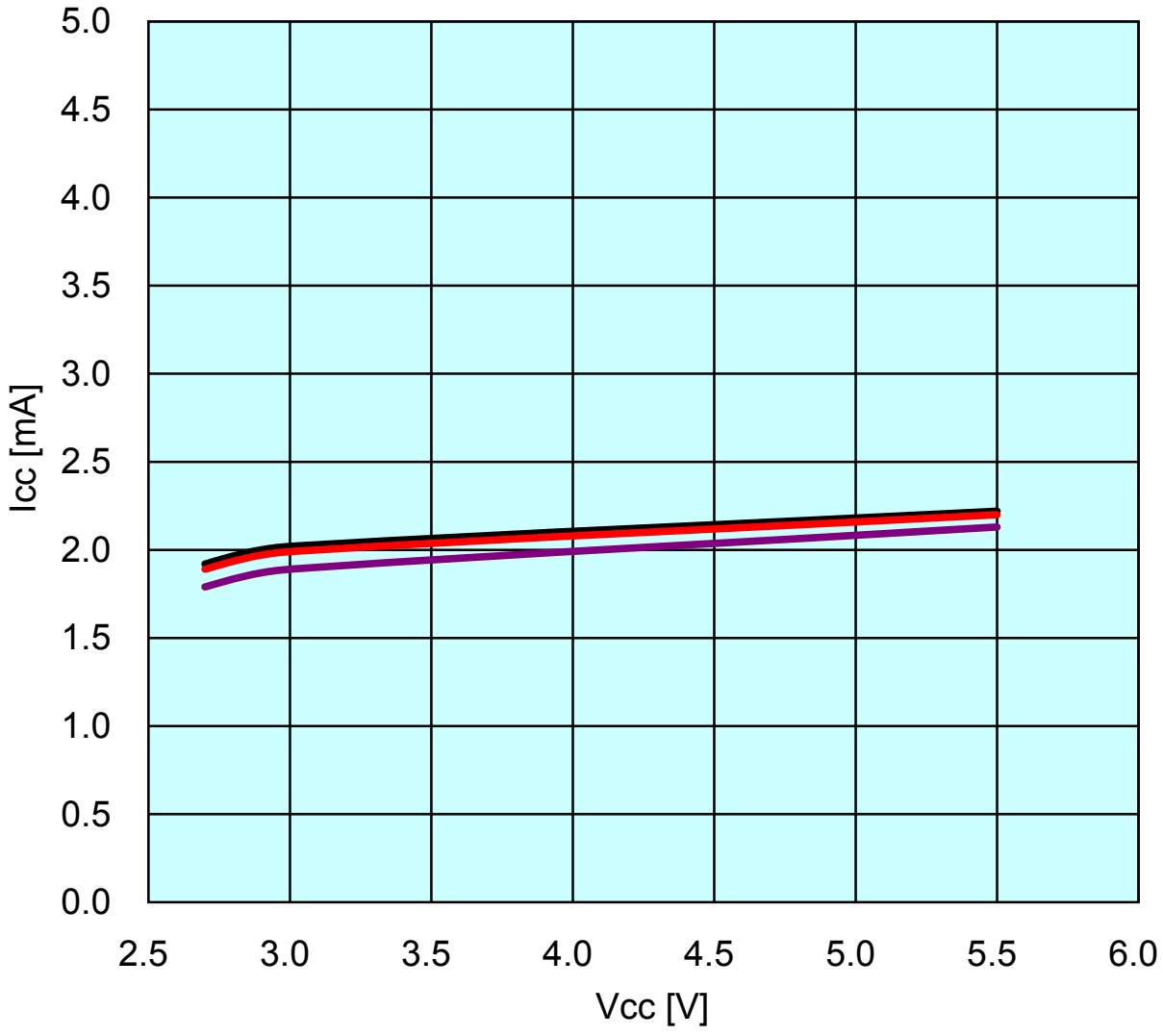


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(High-speed on-chip oscillator mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock off
High-speed on-chip oscillator on = 20MHz
Low-speed on-chip oscillator on = 125 kHz
Divide-by-8
Sensor Control Unit on

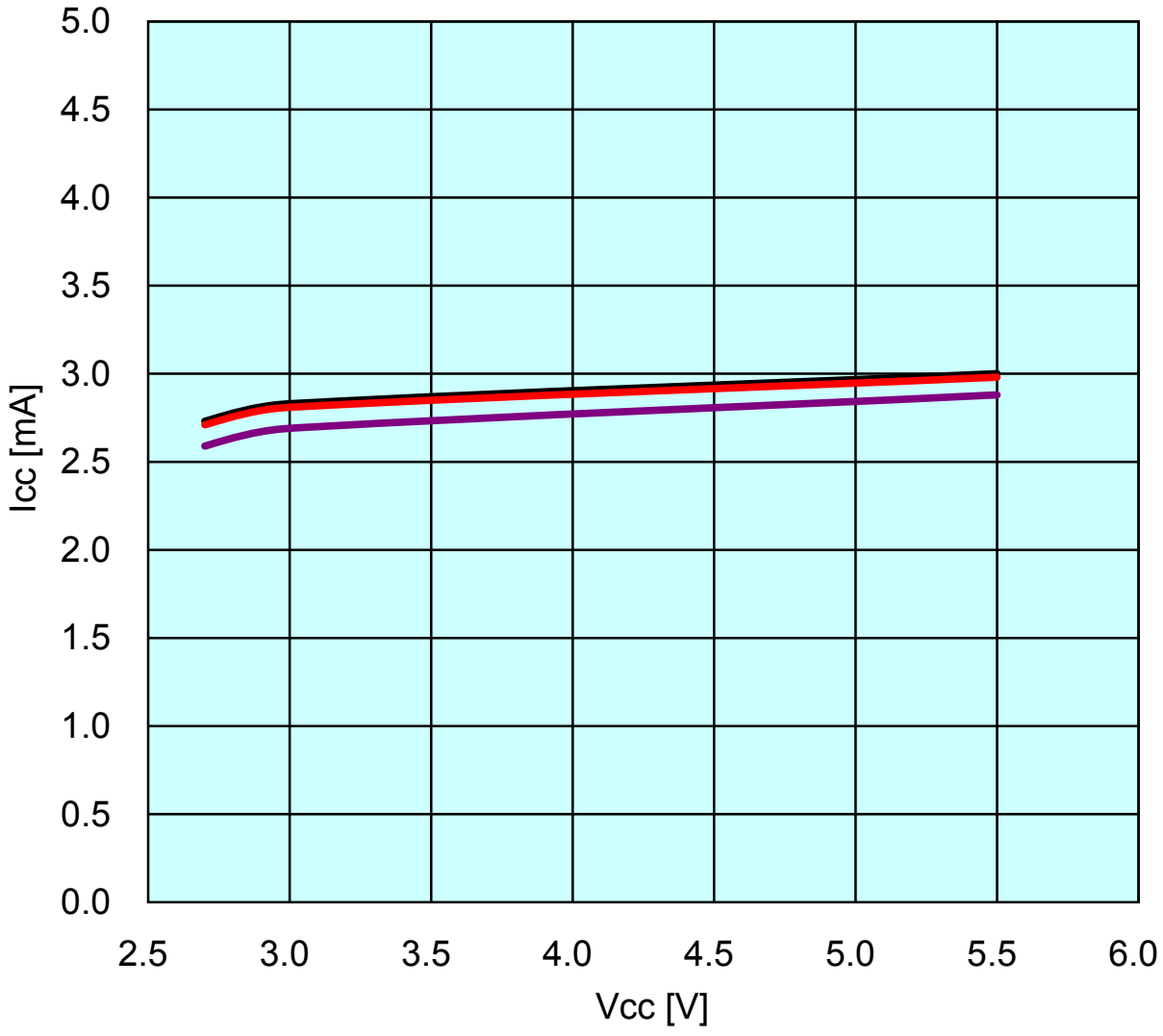


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(High-speed on-chip oscillator mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock off
High-speed on-chip oscillator on = 10MHz
Low-speed on-chip oscillator on = 125 kHz
No division
Sensor Control Unit on

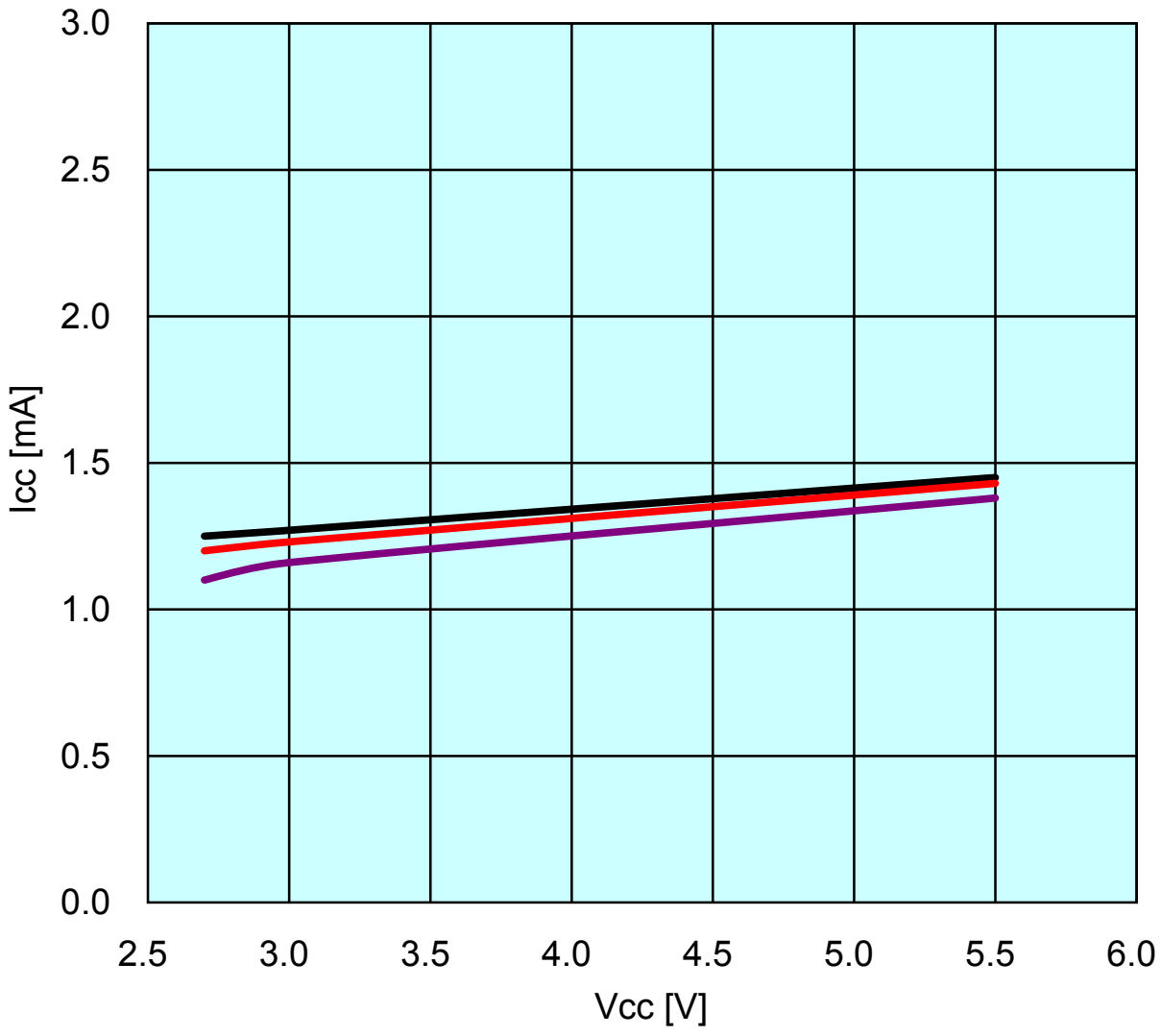


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(High-speed on-chip oscillator mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock off
High-speed on-chip oscillator on = 10MHz
Low-speed on-chip oscillator on = 125 kHz
Divide-by-8
Sensor Control Unit on

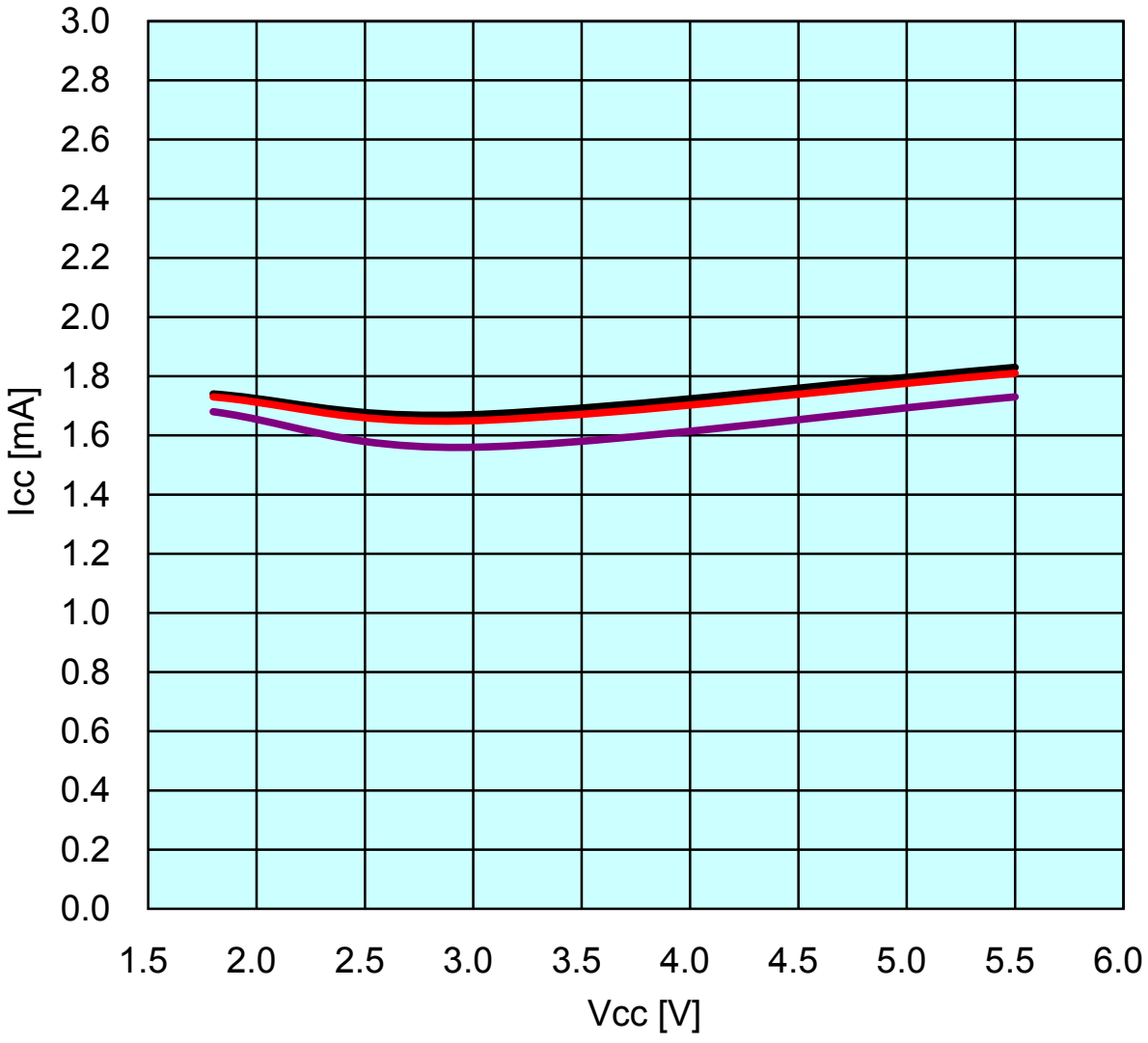


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(High-speed on-chip oscillator mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock off
High-speed on-chip oscillator on = 5MHz
Low-speed on-chip oscillator on = 125 kHz
No division
Sensor Control Unit on

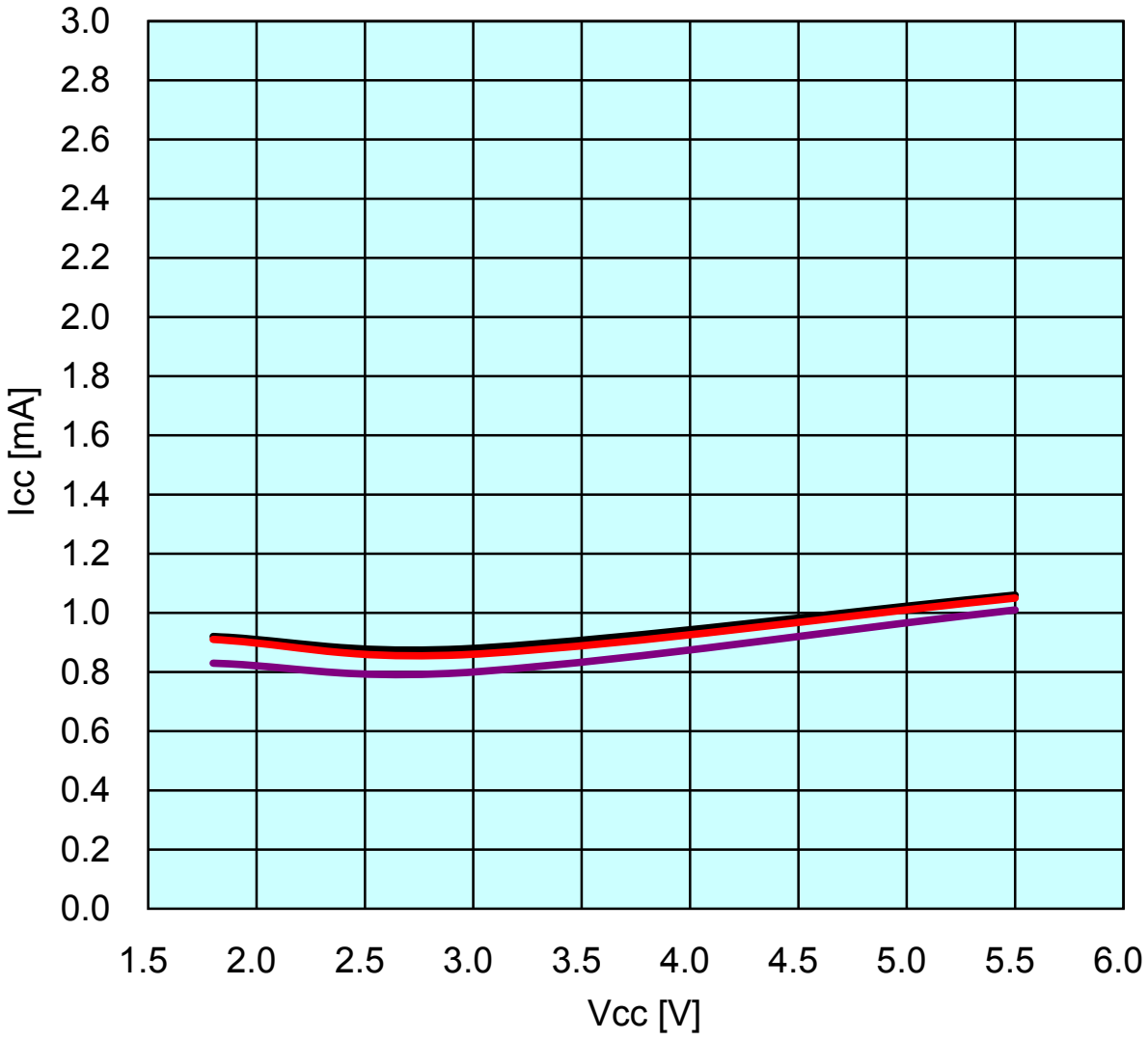


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(High-speed on-chip oscillator mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock off
High-speed on-chip oscillator on = 5MHz
Low-speed on-chip oscillator on = 125 kHz
Divide-by-8
Sensor Control Unit on

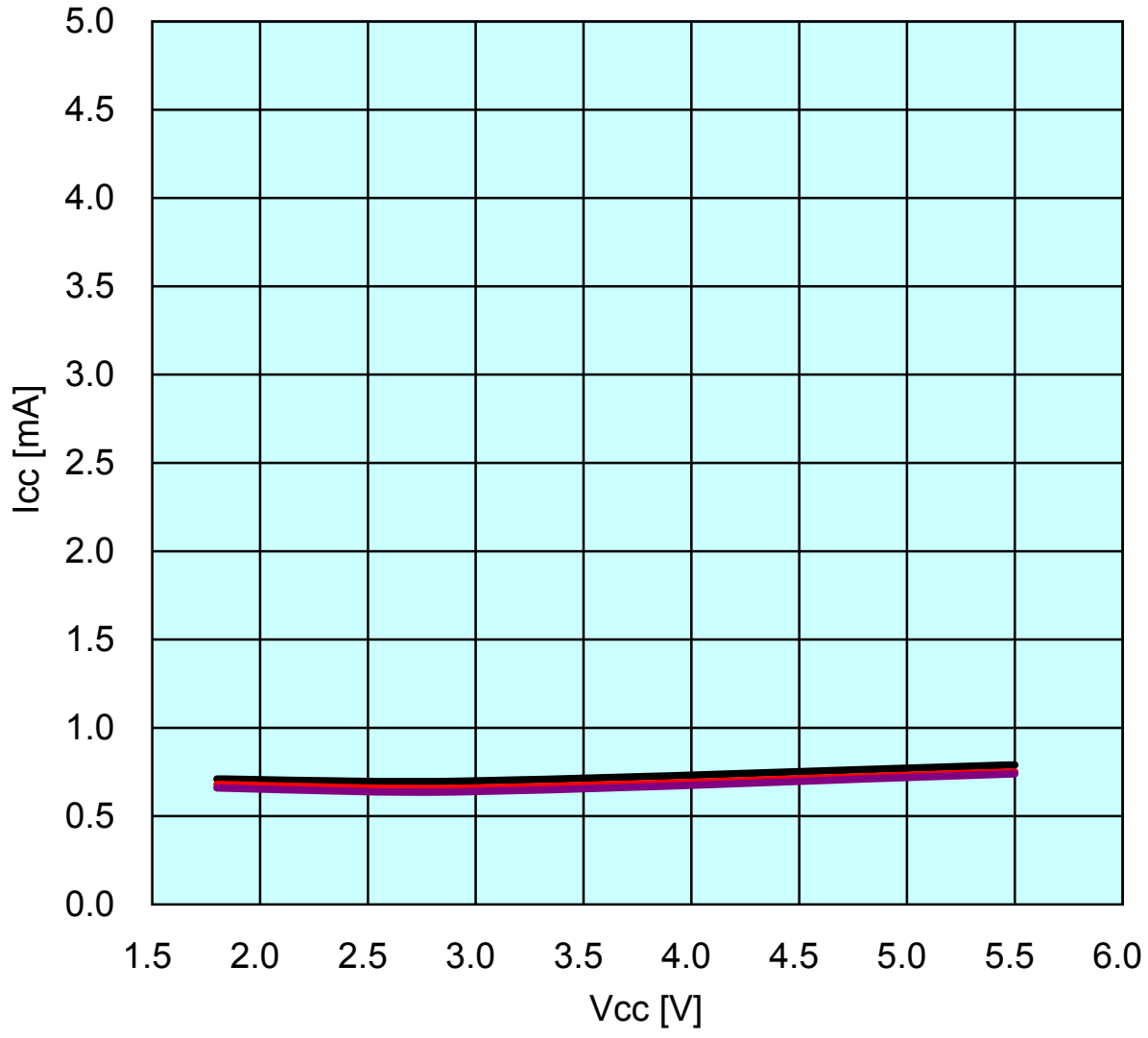


The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

Icc vs Vcc
(High-speed on-chip oscillator mode)

Prepared on Jun. 30, 2010

R8C/33T Group
XIN clock off
High-speed on-chip oscillator on = 4MHz
Low-speed on-chip oscillator on = 125 kHz
Divide-by-16
MSTTRC = 1
Sensor Control Unit on



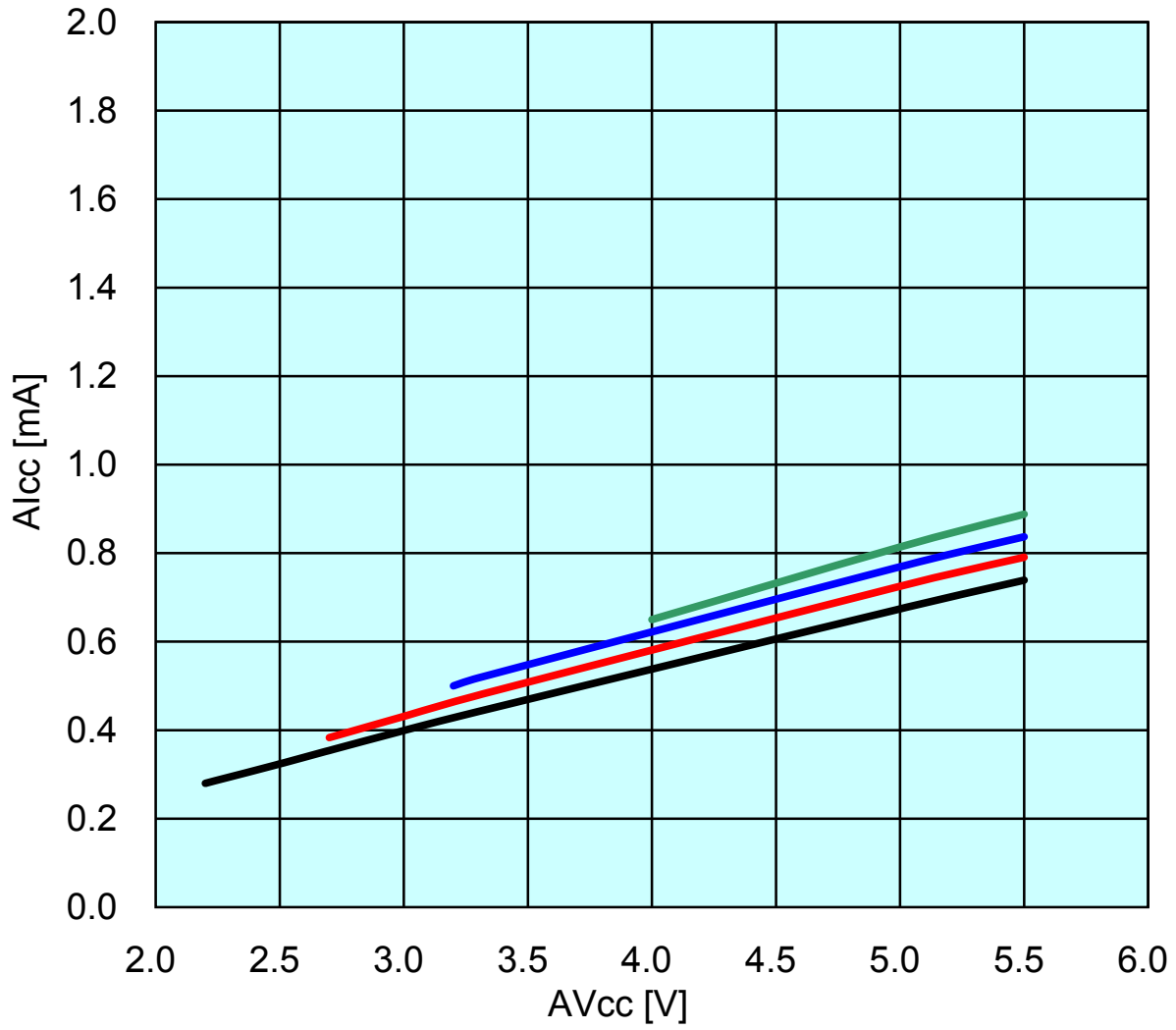
The mentioned value is only for your reference. The value is for the arbitrary samples and does not guarantee the product's characteristics.

AIcc vs **AVcc**

(during A/D conversion)

Prepared on Jun. 30, 2010

R8C/33T Group
Topr = 25 degrees C
AVcc-Vss:0.1uF Vref-Vss:0.1uF
ANIN-Vss:0.1uF
10-bit mode
Repeat mode 0
The ICC amount of increase when analog to digital conversion operates



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