

August 20, 2012

Via EDGAR

Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, DC 20549

Attention: Tim Buchmiller, Division of Corporation Finance

Re: Microchip Technology Incorporated
Form 10-K for fiscal year ended March 31, 2012
Commission File No. 0-21184

Ladies and Gentlemen:

On behalf of Microchip Technology Incorporated (the “Company”), we have attached the Company’s response to the comments of the Staff (the “Staff”) of the Securities and Exchange Commission set forth in the Staff’s letter dated July 30, 2012 relating to the Company’s Form 10-K for the fiscal year ended March 31, 2012.

If you should have any questions regarding the Company’s response, please do not hesitate to contact the undersigned at (512) 338-5400.

Very truly yours,

WILSON SONSINI GOODRICH & ROSATI
Professional Corporation

/s/ J. Robert Suffoletta
J. Robert Suffoletta, Esq.

Enclosure

MICROCHIP TECHNOLOGY INCORPORATED
MEMORANDUM OF RESPONSE TO SEC COMMENTS
AS SET FORTH IN THE STAFF'S LETTER DATED JULY 30, 2012

This memorandum sets forth the response of Microchip Technology Incorporated (“we” or the “Company”) to the comments of the Staff (the “Staff”) of the Securities and Exchange Commission (the “Commission”) as set forth in the Staff’s letter dated July 30, 2012 relating to the Company’s Form 10-K for fiscal year ended March 31, 2012.

This Memorandum is being filed via EDGAR. For convenience, the Company has incorporated the Staff’s comments in bold typeface before its response.

Form 10-K for the Fiscal Year Ended March 31, 2012

Our Products, page 4

- 1. We note your discussion of product types. In your future filings, please state for each of the last three fiscal years the amount or percentage of total revenue contributed by any class of similar products or services which accounted for 10 percent or more of consolidated revenue in the last three fiscal years. See Item 101(c)(1)(i) of Regulation S-K. We note for example, your discussion of 8-bit and 16-bit "product lines" in your Q4 2012 earnings conference call. Additionally, we note your discussion in the 10-K of the 8-bit, 16-bit and 32-bit microcontroller markets. In future filings, please clarify if your microcontroller products are sold predominantly into any one of these markets.**

Microchip Response:

We advise the Staff that all of our microcontroller devices are in the same class of similar products within the meeting of Item 101(c)(1)(i) of Regulation S-K. As required by Regulation S-K, we have included both the amount and percentage of our total revenue contributed by our microcontroller products in the last three fiscal years on page 34 of our Form 10-K. Our approach to the microcontroller market is to provide the customer with the type of device that best addresses their application need and such device may be either an 8-bit, 16-bit or 32-bit device. We use the same sales channels to sell all of our microcontroller products and all of our microcontroller products are sold to a broad range of domestic and international customers across a variety of industries including consumer, automotive, industrial, office automation and telecommunications.

Sales and Distribution, page 8

2. **We note your statement that your largest distributor accounted for approximately 10% of your net sales in each of fiscal 2012 and 2011. If sales to this distributor by one or more segments were made in an aggregate amount equal to 10 percent or more of your consolidated revenues, please tell us the name of this distributor and confirm, that in future filings, you will disclose the name of this distributor. Please see Item 101(c)(1)(vi) of Regulation S-K.**

Microchip Response:

The name of our largest distributor is Future Electronics. We confirm that in our future filings, including our quarterly report on Form 10-Q for the period ending June 30, 2012 (which was filed on August 9, 2012), we will disclose the name of this distributor for periods in which the distributor accounted for 10% or more of our net sales.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 28

3. **We note your discussion of the relative strengths of the 8-bit, 16-bit and 32-bit microcontroller markets on page 4 and your discussion in your Q4 earnings conference call of your positions in these markets. To the extent material, in future filings, please discuss how the known trends in those markets have affected your results of operations. For example, in future filings, please address the growth of complex embedded control applications and its effect on your business, noting your positions in the 16-bit and 32-bit microcontroller markets. Please also, in future filings, address any risks that may result if you do not increase market share in the 16-bit and 32-bit microcontroller markets.**

Microchip Response:

We have been making 8-bit devices since the early 1990's, 16-bit devices since fiscal 2004 and 32-bit devices since fiscal 2008. Our overall approach to the microcontroller market is to offer customers a broad range of microcontroller products that can meet the needs of their particular applications. At Microchip, we don't have a preference if our customers select an 8-bit, 16-bit or 32-bit microcontroller for use in their application. Our goal is to provide the customer with a cost effective solution that meets the requirements of their product.

According to industry data, annual microcontroller market sales are approximately \$15 billion, and we believe there are many opportunities for Microchip to continue to gain market share. We believe our long-term success depends on our penetration of the overall microcontroller market and that there are attractive growth opportunities in 8-bit, 16-bit and 32-bit applications. Unlike certain other types of semiconductor devices, such as microprocessors, microcontrollers typically have a very long product life and an application using an 8-bit device

does not typically transition to a 16-bit or 32-bit device. We believe that market share gains in the overall microcontroller market are more important to our success than gains in individual 8-bit, 16-bit or 32-bit applications. If, over time, we are not able to increase our market share for either our 16-bit or 32-bit devices, we believe we could re-allocate resources to focus on other areas of the embedded control market and we do not believe such outcome would have a material adverse impact on our business.

To the extent material, in future filings, we will discuss how trends in 8-bit, 16-bit and 32-bit microcontrollers affect our results of operations.

Critical Accounting Policies and Estimates, page 30 Inventories, page 32

- 4. We note your disclosures herein and on page F-9 related to your valuation of inventory. Please revise your future filings to discuss in more detail how you develop certain of your assumptions such as "estimates of demand over a 12-month period" for purposes of your inventory valuation analysis. Your revised disclosures should also indicate how you arrived at your estimates for projected usage and the historical variability of such estimates. Please provide us with a sample of your proposed disclosure.**

Microchip Response:

We will revise our future filings to discuss in more detail how we develop certain of our inventory valuation assumptions. The following is an example of our revised disclosure.

Inventories are valued at the lower of cost or market using the first-in, first-out method. We write down our inventory for estimated obsolescence or unmarketable inventory in an amount equal to the difference between the cost of inventory and the estimated market value based on assumptions about future demand and market conditions. If actual market conditions are less favorable than those we projected, additional inventory write-downs may be required. Inventory impairment charges establish a new cost basis for inventory and charges are not subsequently reversed to income even if circumstances later suggest that increased carrying amounts are recoverable. In estimating our inventory obsolescence, we primarily evaluate estimates of demand over a 12-month period and record impairment charges for inventory on hand in excess of the estimated 12-month demand. Estimates for projected 12-month demand are based on the average shipments of the prior six-month period, which are then annualized to adjust for any potential seasonality in our business. The estimated 12-month demand is compared to our most recently developed sales forecast to further reconcile the 12-month demand estimate. Management reviews and adjusts the estimates as appropriate based on specific situations. For example, demand can be adjusted up for new products for which historic sales are not representative of future demand. Alternatively, demand can be adjusted down to the extent any existing products are being replaced or discontinued.

Results of Continuing Operations, page 34

5. We note your disclosures on pages 37 and F-2 related to your inventory and that your inventory levels have increased by approximately 20% from March 31, 2011 to March 31, 2012. We further note from page 9 that your back-log has decreased by approximately 40% from April 30, 2011 to April 30, 2012. We finally note on page 12 that during the 3rd quarter of fiscal 2012 you reduced wafer starts to control inventory balances in response to a slowdown in global economic conditions. Please explain to us in more detail how you have evaluated inventory for recoverability as of March 31, 2012. Explain why you believe the full amount of inventory recorded at your 2011 and 2012 fiscal year end balance sheet dates is recoverable.

Microchip Response:

We advise the Staff that our backlog decrease of 40% cannot be directly correlated to the overall shipment activity due to large distributors and OEM's reducing their forward looking booking activity based on business conditions. During slowdowns of business cycles, our distributors and OEMs usually dramatically reduce their inventory of Microchip devices as our lead times are much lower than the industry average. Microchip prides itself on being able to offer industry best lead times and we also have long product life cycles which are generally greater than 5 years. The vast majority of our products in inventory at March 31, 2012 and March 31, 2011 were high frequency/high volume products which had inventory balances that were considerably less than 12 months demand and are therefore, fully recoverable devices. Microchip reviews products for low or zero demand and establishes reserves accordingly on a quarterly basis. We did take obsolescence reserve charges in the amount of \$16.2 million in fiscal 2012 as a result of an increase in inventory levels in excess of forecasted demand.

Liquidity and Capital Resources, page 40

6. We note your disclosures on page F-24 that you consider \$1.9 billion of undistributed earnings of your subsidiaries outside the United States to be permanently reinvested. To the extent such amounts could be considered material to an understanding of your liquidity and capital resources, please revise your future filings to disclose the amounts of the cash and cash equivalent amounts held by your foreign subsidiaries that would not be available for use in the United States. Please further provide a discussion of any known trends, demands or uncertainties as a result of this policy that are reasonably likely to have a material effect on the business as a whole or that may be relevant to your financial flexibility. Refer to Item 303(a)(1) and (2) of Regulation S-K, SEC Release 34-48960, and Financial Reporting Codification Section 501.03.a.
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Microchip Response:

In response to the Staff's comment, we will disclose in future filings, including our quarterly report on Form 10-Q for the period ending June 30, 2012 (which was filed on August 9, 2012), the amount of cash and cash equivalents and investments held by our foreign subsidiaries. We will also add disclosure regarding known trends, demands or uncertainties related to the location of our cash and cash equivalents and investments including that we expect that a significant portion of our future cash generation will be in our foreign subsidiaries.

7. **We note your disclosures on page F-9 related to how you assess your accounts receivables for impairment and your concentration of sales to customers in European countries disclosed on page F-32. Please explain to us in more detail how your receivable impairment assessments were impacted by the European sovereign debt crisis and economic conditions as well as your concentration of sales in these foreign countries.**

Microchip Response:

We advise the Staff that our receivable impairment assessments were not materially impacted by the European sovereign debt crisis and economic conditions or the concentration of sales in these foreign countries. Approximately 23% of our total sales are in Europe, but our products and our customers are very broad based (70,000+ customers worldwide) so there is no one customer in the region that represents more than 2% of our sales. We also perform thorough credit reviews prior to taking on any receivables exposure and are able to use our distributor channel partners to serve many of the smaller and/or higher risk customers. As a result, we have had very insignificant bad debt write offs in the past several years including the most recent years in which the Eurozone has been under stress. We note that, during fiscal 2012, our days sales outstanding remained consistent with the levels in prior years with excellent payment performance continuing from our customers.

The Company acknowledges that:

- the Company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the Company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Microchip Technology Incorporated

By: /s/ J. Eric Bjornholt

Title: Vice President and Chief Financial Officer