

Materials & Supply Chain Bulletin

November 2019



Lead Times Continue to Trend Downward as Winter Approaches

Lead-times continue to trend downward for all commodities. Most notably, the MLCC commodity has lowered even more. Lead-times have come down from the 52-week level to the 20-30 week level or less on nearly all case sizes. There is now a large proportion of MLCC's with general distribution availability. Larger case sizes can still be problematic, mostly due to Murata and TDK obsoleting a large proportion of their MLCC catalog (9,000 and 241,000 product lines respectively).

As we covered in last month's bulletin, 5G networks are being rolled out in China with 5 of their top carriers being issued licenses, having spent the last year testing these networks. Around 12,000 MLCC's are required for each 5G base station and China is expected to require 90,000. Availability of smaller case size MLCC's is predicted to decrease as rapid growth of global 5G networks is forecast through 2024.

Diodes and transistor lead-times have stabilized. Power mosfet lead-times are continuing on a downward trend. DDR4 memory lead-time has increased for the second straight month. **Of the commodity data points we are tracking, there were 10% with lead-time reductions and 1 data point – DDR4 memory – that is trending up on lead-time.**

Here is Your Current Tariff Summary

Below is a summary of the tariffs that are in various stages of effect or proposal stages with dates or



proposed dates.

Section 232 is in full effect at this time. List 1, List 2 and List 3 of Section 301 are also in full effect.

List 4A and 4B have been released. The majority of our supply chain has begun to pass on all tariff charges at this time. The logistics of these costs are

being handled on a supplier and/or manufacturer case-by-case basis

Note that the tariff increase from 25% to 30% for 10/15/2019 has been suspended based on a tentative agreement between US and China.

Action	Covered Products	Rate Increase	Effective Date
Section 232	Steel and Aluminum	Steel – 25% Aluminum – 10%	6/1/2018
Status:	<p>Steel – all countries of origin except South Korea, Brazil, and Argentina (agreed to quotas); and Australia (exempted).</p> <p>Aluminum – all countries of origin except Argentina (agreed to quota); and Australia (exempted).</p>		
Section 232	Autos and Automotive Parts	TBD	TBD
Status:	These tariffs are active and in effect at this time.		
Section 301	LIST 1	25%	7/6/2018
	LIST 2	25%	8/23/2018
	LIST 3	25%	5/10/2019
	List 4A - See Annex A	15%	9/1/2019
	List 4B - See Annex C	15%	12/15/2019
Status:	<p>List 1 totaling \$34 billion worth of imports is composed of 818 tariff lines, and went into effect on 7/6/2018.</p> <p>List 2 totaling \$16 billion worth of imports is composed of 284 proposed tariff lines identified by the interagency Section 301 Committee. These are in a public review process.</p> <p>List 3 totaling approximately \$200 billion of imports was originally composed of 6,031 tariff lines. 5,745 full and partial lines go into effect on 9/24/2018. On June 1, 2019 List 3 tariffs did increase to 25 percent.</p>		

LINKS TO THE TARIFF LISTS ARE BELOW

MARKET CONDITIONS - NOVEMBER 2019

Commodity	Specific Types	Price	Lead-Time	Notes
Passives and Magnetics	Inductors	Stable	Stable	
	MLCCs/Ceramic Caps	Stable	Currently stable	Lead-times continue to decrease....range is from 16-30 weeks at this time; general availability has improved greatly
	Resistors	Stable	Stable	other than some areas within resistor networks; lead-times have come down and still trending downward
	Tantalum Caps	Stable	Stable	Lead-times have decreased
Electromechanical	Frequency Control	Stable	Stable	12-24 weeks
	Relay	Stable	Increasing	10-23 weeks
	Switch	Stable	Stable	12-18 week lead-times
Interconnect	Fiber Optic	Stable	Stable	
	Midplane/Backplane	Stable	Stable	
	Socket	Stable	Stable	
	Terminal	Stable	Stable	
	Board to Board	Stable	Stable	
Power	Batteries	Stable	Stable	
	Power Supplies	Stable	Stable	
Analog / Linear	Amplifiers	Stable	Stable	8-26 weeks; lead-times have stabilized albeit at a high level
	Converters	Stable	Stable	7-16 weeks
	Interface	Stable	Stable	8-16 weeks
	Power Management	Stable	Stable	8-12 weeks
	Timing	Stable	Stable	8-12 weeks
High End Semi	Communication	Stable	Stable	
	Controllers and Processors	Stable	Stable	Infineon lead-times have now stabilized for most commodities
	Programmable Logic	Stable	Stable	10-24 weeks; stable with some areas of decreasing lead-time
Logic / Discreet	Advanced Logic	Stable	Stable	12-28 weeks and stable
	Diodes	Stable	Stable	10-24 weeks; lead-times are stabilizing at a high level
	Standard Logic / Mosfets	Stable	Stable	averaging 8-37 weeks; lead-times trending down
	Transistors	Stable	Stable	lead-time has stabilized
Memory	DRAM	Stable	Stable	lead-time has stabilized
	Programmable Read Only	Stable	Stable	lead-time has stabilized
	NAND Flash	Stable	Stable	lead-time has stabilized
	SRAM	Stable	Stable	lead-time has stabilized

MANUFACTURER CONDITIONS - NOVEMBER 2019

MFG	Supply Chain Notes
Altera	Lead-times have stabilized at up to 26 weeks
Analog Devices	Lead-times and pricing are stable
AVX	Lead times at 30 weeks
Broadcom/Avago	Lead-times stabilized at 24 weeks
Freescale	Lead times stablized at up to 24 weeks
Infineon	lead-times have stabilized at this time
Kemet	Lead times at 30 weeks
KOA	Lead times at 30 weeks
Microchip/Microsemi/Atmel	Lead-times at 24 weeks and stable
Micron	stable lead-times at up to 16 weeks
Murata	Murata has 70% MLCC Market share, they currently have global demand for 1 billion units/mth, they can support 500 million / mth. Increasing capacity by end of 2019
NXP, Nexperia	Lead times at 24 weeks on average
Omron	Lead times up to 20 weeks, no allocations
On Semi/Fairchild	Lead-times at 26 weeks
ST Micro	Lead-times stable at up to 24 weeks; pricing stable with some decreases
Vishay	Resistors have stabilized at 30 week lead times or less; Transistors are at 20-28 weeks and mosfets are at 28 weeks. Re-started production of MLCCs from their Vitramon division.
Xilinx	Lead times stable at up to 28 weeks

As always, we will continue to monitor this situation and look for options to reduce costs to customers wherever possible.

Thank You,
Gary DeGrave, Jr., Corporate Materials Director
 Milwaukee Electronics



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