

## Introduction

This application sheet compares the MT9042C functionality with that of the MT9042B.

The MT9042C is a pin to pin compatible and functionally enhanced version of the MT9042B. Most systems currently using the MT9042B will be able to accept the MT9042C with little or no modifications to their existing hardware and software.

Table 1 below illustrates the functional differences between the two devices. Refer to the MT9042C datasheet for a detailed functional and electrical description of the part.

Item	Description	MT9042B	MT9042C
1	$\overline{C16}$ Output Clock Duty Cycle	The $\overline{C16}$ output clock duty cycle depends on the duty cycle of the 20 MHz master clock.	The $\overline{C16}$ output clock duty cycle is 50%, regardless of the duty cycle of the 20 MHz master clock.
2	Power Consumption	$I_{DD} = 90$ mA.	$I_{DD} = 60$ mA.
3	AC Electrical Characteristics - Input/Output Timing	See Table 2	See Table 2

**Table 1 - Functional Differences Between MT9042B and MT9042C**

Symbol	MT9042B		MT9042C	
	Min	Max	Min	Max
$t_{R8D}$	-10	20	-21	6
$t_{R15D}$	310	350	337	363
$t_{R2D}$	230	265	222	238
$t_{F0D}$	110	135	110	134
$t_{F16D}$	15	35		
$t_{F16S}$			11	35
$t_{F16H}$			0	20
$t_{C15D}$	-15	10	-51	-37
$t_{C3D}$	-15	10	-51	-37
$t_{C2D}$	-8	7	-13	2
$t_{C4D}$	-8	7	-13	2
$t_{C8D}$	-8	7	-13	2
$t_{C16D}$	-8	7	-13	2

**Table 2 - Differences Between the AC Electrical Characteristics of MT9042B and MT9042C  
(units in nano seconds)**



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