

MOTOROLA INTEGRATED CIRCUITS
TTL 5400 - 7400 Series

| Rating | Value | Unit |
|--------------------------------|--------------|-------------|
| Supply Voltage - V_{CC} | +7.0 | Vdc |
| Supply Operating Voltage Range | 4.5 to 5.5 | Vdc |
| Input Voltage - V_{in} | +5.5 | Vdc |
| Output Voltage - V_{out} | +5.5 | Vdc |
| Operating Temperature Range | -55 to +125 | °C |
| Storage Temperature Range | -65 to +150 | °C |

| Function | Type/Pkg | Loading Factor Each Output | Power Dissipation Mw typ/pkg |
|---|-----------------|---------------------------------------|---|
| Quad 2-Input NAND Gate | 5400/C,A | 10 | 40 |
| Quad 2-Input NAND Gate (O.C.) | 5401/C,A | 10 | 40 |
| Quad 2-Input NOR Gate | 5402/C,A | 10 | 40 |
| Quad 2-Input NAND Gate (O.C.) | 5403/C,A | 10 | 40 |
| Hex Inverter | 5404/C,A | 10 | 60 |
| Hex Inverter (O.C. Output) | 5405/C,A | 10 | 60 |
| Hex Inverter Buffer/Driver (O.C. Output) | 5406/C,A | - | - |
| Hex Buffer/Driver (O.C. Output) | 5407/C,A | - | - |
| Quad 2-Input AND Gate | 5408/C,A | - | - |
| Quad 2-Input AND Gate (O.C. Output) | 5409/C,A | - | - |
| Triple 3-Input NAND Gate | 5410/C,A | 10 | 30 |
| Triple 3-Input NAND Gate | 5412/C,A | - | - |
| Dual 4-Input NAND Schmitt Trigger | 5413/C,A | - | - |
| Hex Schmitt Trigger/Inverter | 5414/C,A | - | - |
| Hex Inverter Buffer/Driver (O.C.) | 5416/C,A | - | - |
| Hex Buffer/Driver | 5417/C,A | - | - |
| Dual 4-Input NAND Gate | 5420/C,A | 10 | 20 |

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| Expandable Dual 4-Input NOR Gate | 5423/E,F | - | - |
| Dual 4-Input NOR Gate | 5425/C,A | - | - |
| Quad 2-Input Interface NAND Gate | 5426/C,A | 10 | 40 |
| Triple 3-Input NOR Gate | 5427/C,A | - | - |
| Quad 2-Input NOR Buffer | 5428/C,A | - | - |
| 8-Input NAND Gate | 5430/C,A | 10 | 10 |
| Quad 2-Input NAND Buffer | 5437/C,A | - | - |
| Quad 2-Input NAND Buffer (O.C.) | 5438/C,A | - | - |
| Dual 4-Input NAND Buffer | 5440/C,A | 30 | 50 |
| BCD-to-Decimal Decoder/Driver | 5441A/E,F | - | 105 |
| BCD-to-Decimal Decoder | 5442/E,F | 10 | 140 |
| BCD-to-Decimal Decoder | 5442A/E,F | 10 | 140 |
| Excess 3-to-Decimal Decoder | 5443/E,F | 10 | 140 |
| Excess 3 Gray-to-Decimal Decoder | 5444/E,F | 10 | 140 |
| BCD to 1-of-10 Decimal Decoder | 5445/E,F | - | 215 |
| BCD-to-7 Segment Decoder/Driver | 5446/E,F | 5 | 265 |
| BCD-to-7 Segment Decoder/Driver | 5447/E,F | 5 | 265 |
| BCD-to-7 Segment Decoder/Driver | 5448/E,F | 5 | 265 |
| BCD-to-7 Segment Decoder/Driver | 5449/C,A | 6 | 165 |
| Expandable Dual 2-Wide 2-Input AOI Gate | 5450/C,A | 10 | 28 |
| Dual 2-Wide 2-Input AOI Gate | 5451/C,A | 10 | 28 |
| Expandable 4-Wide 2-Input AOI Gate | 5453/C,A | 10 | 22 |

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| 4-Wide 2-Input AOI Gate | 5454/C,A | 10 | 22 |
| Dual 4-Input Gate Expander | 5460/C,A | 10 | 8 |
| Edge-Triggered J-K Flip-Flop | 5470/C,A | 10 | 65 |
| J-K Master-Slave Flip-Flop | 5472/C,A | 10 | 40 |
| Dual J-K Master-Slave Flip-Flop | 5473/C,A | 10 | 80 |
| Dual Type D Edge-Triggered Flip-Flop | 5474/C,A | 10 | 84 |
| Quad Bistable Latch | 5475/E,F | 10 | 160 |
| Dual J-K Master-Slave Flip-Flop | 5476/E,F | 10 | 80 |
| Quad Bistable Latch | 5477/C,A | - | - |
| Dual Type D Edge-Triggered Flip-Flop | 5479/C,A | 10 | 84 |
| Gated Full Adder | 5480/C,A | 10 | 105 |
| 16-Bit Memory | 5481/C,A | - | - |
| 4-Bit Binary Full Adder | 5483/E,F | 10 | 390 |
| 16-Bit Scratch Pad Memory Cell | 5484/E,F | - | 250 |
| 4-Bit Magnitude Comparator | 5485/E,F | - | - |
| Quad 2-Input Exclusive OR Gate | 5486/C,A | - | - |
| Decade Counter | 5490/C,A | 10 | 160 |
| 8-Bit Shift Register | 5491A/C,A | 10 | 175 |
| Divide-by-12 Counter | 5492/C,A | 10 | 160 |
| 4-Bit Binary Counter | 5493/C,A | 10 | 160 |
| 4-Bit Shift Register | 5494/E,F | - | 175 |
| 4-Bit Shift Register | 5495/C,A | 10 | 250 |
| 5-Bit Shift Register (Parallel-In/Out) | 5496/E,F | - | 240 |

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| Synchronous 6-Bit Binary Rate Multiplier | 5497/E,F | - | - |
| 8-Bit Bistable Latch | 54100/J,K | - | - |
| Dual J-K Master-Slave Flip-Flop | 54107/C,A | 10 | 80 |
| Dual Pulse Synchronizer/Driver | 54120/E,F | - | - |
| Monostable Multivibrator | 54121/C,A | 10 | 90 |
| Retriggerable Monostable Multivibrator | 54122/C,A | - | - |
| Dual Retriggerable Monostable Multivibrator | 54123/E,F | - | - |
| Quad 2-Input NOR Buffer | 54128/C,A | - | - |
| Quad 2-Input NAND Schmitt | 54132/C,A | - | - |
| Quad 2-Input Exclusive OR Gate (O.C.) | 54136/C,A | - | - |
| BCD-to-Decimal Decoder/Driver | 54141/E,F | - | - |
| BCD to One-Of-Ten Decoder/Driver | 54145/E,F | - | 215 |
| 16-Channel Data Selector/Multiplexer | 54150/J,K | - | 200 |
| 8-Channel Data Selector/Multiplexer | 54151/E,F | - | 145 |
| 8-Channel Data Selector/Multiplexer | 54152/C,A | - | - |
| Dual 4-to-1 Line Data Selector/Multiplexer | 54153/E,F | - | - |
| 4 Line to 16 Line Decoder/Demultiplexer | 54154/J,K | - | - |
| Dual 2 to 4 Line Decoder/Demultiplexer | 54155/E,F | - | - |
| Dual 2 to 4 Line Decoder/Demultiplexer (O.C.) | 54156/E,F | - | - |
| Synchronous Decade Counter | 54160/E,F | - | - |

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| Synchronous 4-Bit Binary Counter | 54161/E,F | - | - |
| Fully Synchronous Decade Counter | 54162/E,F | - | - |
| Fully Synchronous 4-Bit Binary Counter | 54163/E,F | - | - |
| 8-Bit Shift Register | 54164/C,A | - | - |
| 8-Bit Shift Register | 54164A/C,A | - | - |
| Parallel Load 8-Bit Shift Register | 54165/E,F | - | - |
| 8-Bit Shift Register | 54166/E,F | - | - |
| Synchronous Decade Decimal Rate Multiplier | 54167/E,F | - | - |
| Hex Type D Flip-Flop w/Clear | 54174/E,F | - | - |
| Quad Type D Flip-Flop w/Clear | 54175/E,F | - | - |
| BCD Decade Counter | 54176/C,A | - | - |
| 4-Bit Binary Counter | 54177/C,A | - | - |
| 4-Bit Shift Register | 54178/C,A | - | - |
| 4-Bit Shift Register | 54179/E,F | - | - |
| 8-Bit Odd/Even Parity Generator/Checker | 54180/C,A | - | - |
| 4-Bit ALU and Function Generator | 54181/J,K | - | - |
| Look Ahead Carry Generator for ALU | 54182/E,F | - | - |
| Synchronous Up/Down Decade Counter | 54190/E,F | - | - |
| Synchronous Up/Down 4-Bit Binary Counter | 54191/E,F | - | - |
| Synchronous Up/Down Decade Counter | 54192/E,F | - | - |

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| Synchronous Up/Down 4-Bit Binary Counter | 54193/E,F | - | - |
| 4-Bit Parallel-In/Out Shift Register | 54194/E,F | - | - |
| 4-Bit Parallel-In/Out Shift Register | 54195/E,F | - | - |
| 50 MHz Presettable Decade Counter/Latch | 54196/C,A | - | - |
| 50 MHz Presettable 4-Bit Binary Counter/Latch | 54197/C,A | - | - |
| 8-Bit Shift Register | 54198/J,K | - | - |
| 8-Bit Shift Register | 54199/J,K | - | - |
| Quad S-R Latch | 54279/E,F | - | - |
| Decade Counter | 54290/C,A | - | - |
| 4-Bit Binary Counter | 54293/C,A | - | - |
| Quad 2-Input Multiplexer w/Storage | 54298/E,F | - | - |
| 2-Bit Full Adder | 15482/C,A | - | - |
| 2-Bit Full Adder | 25482/C,A | - | - |