

MC68000 : Low Cost 32-Bit Microprocessor (Including HC000, HC001, EC000 and SEC000)

The industry's lowest cost 32-bit microprocessor, the MC68000 offers an excellent low cost entry point to the M68000 Family. The MC68HC000 is a CMOS version of the original MC68000. The MC68HC001 is also a CMOS version of the original MC68000 with 8-/16-bit selectable data bus. The MC68EC000 version provides a lower cost 68000 solution. The MC68SEC000 version provides a static, low power implementation consuming only 15.0mA in normal 3.3V operation and 0.5mA in static standby mode.

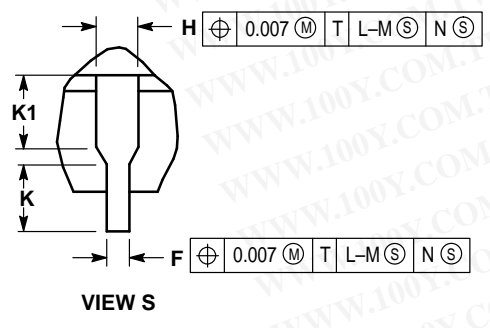
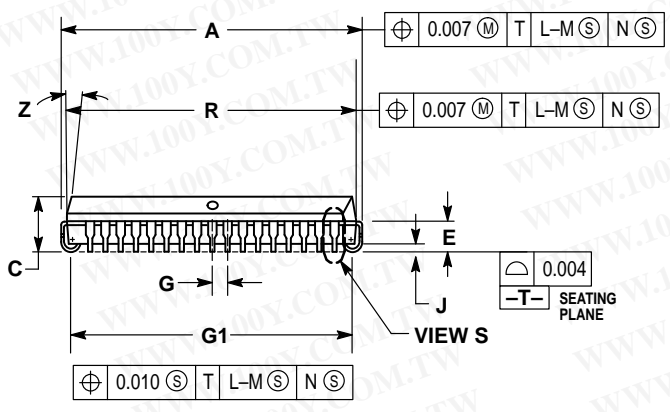
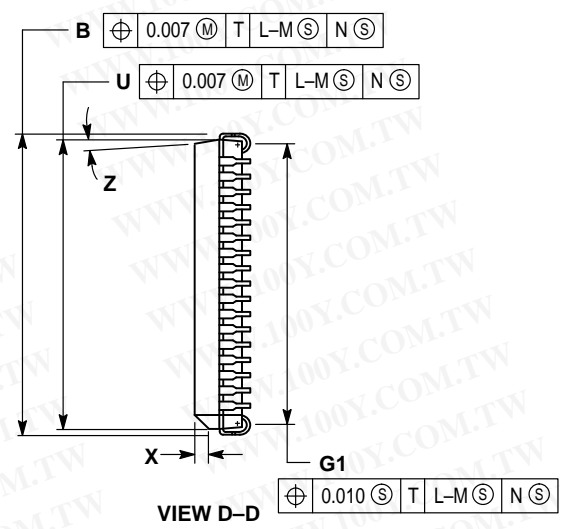
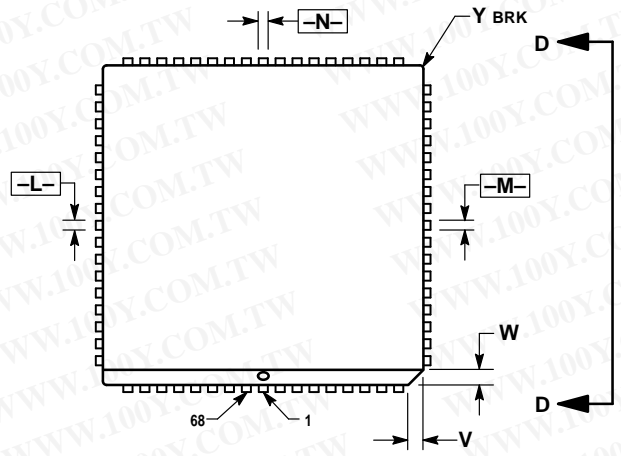
MC68000 Features

- 32 Bit Data and Address Registers
- 16 MByte Direct Addressing Range
- 56 Powerful Instructions
- Memory Mapped Input/Output
- 14 Addressing Modes
- 2 MIPS at 20MHz
- Available in 8, 10, 12, 16 & 20 MHz speeds (MC68HC000 and MC68EC000)
- Available in 10, 16 & 20 MHz speeds (MC68SEC000)
- Available in 8, 10, 12 & 16 MHz speeds (MC68HC001)

MC68000 Parametrics

Product Family	CPU Performance (Max) (MIPS)	Operating Frequency (Max) (MHz)	Core Operating Voltage (Spec) (V)	I/O Operating Voltage (Max) (V)	Ambient Temp (Min) (oC)	Ambient Temp (Max) (oC)	L1 Cache Instructional (Max) (kByte)
68K/ColdFire	2	8, 10, 12, 16, 20	3.3, 5	5	-40, 0	70, 85	0

L1 Cache Data (Max) (kByte)	Bus Interface	Package Description	Availability
0	16-bit, 8-bit or 16-bit	LQFP 64 10*10*1.4P0.5, PGA 68 27*27 10*10 GRID, PLCC 68, QFP 64 14*14*2.2P0.8	Production Now



- NOTES:
- DATUMS L, M, AND N DETERMINED WHERE TOP OF LEAD SHOULDER EXITS PLASTIC BODY AT MOLD PARTING LINE.
 - DIMENSION G1, TRUE POSITION TO BE MEASURED AT DATUM T, SEATING PLANE.
 - DIMENSIONS R AND U DO NOT INCLUDE MOLD FLASH. ALLOWABLE MOLD FLASH IS 0.010 PER SIDE.
 - DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
 - CONTROLLING DIMENSION: INCH.
 - THE PACKAGE TOP MAY BE SMALLER THAN THE PACKAGE BOTTOM BY UP TO 0.012. DIMENSIONS R AND U ARE DETERMINED AT THE OUTERMOST EXTREMES OF THE PLASTIC BODY EXCLUSIVE OF MOLD FLASH, TIE BAR BURRS, GATE BURRS AND INTERLEAD FLASH, BUT INCLUDING ANY MISMATCH BETWEEN THE TOP AND BOTTOM OF THE PLASTIC BODY.
 - DIMENSION H DOES NOT INCLUDE DAMBAR PROTRUSION OR INTRUSION. THE DAMBAR PROTRUSION(S) SHALL NOT CAUSE THE H DIMENSION TO BE GREATER THAN 0.037. THE DAMBAR INTRUSION(S) SHALL NOT CAUSE THE H DIMENSION TO BE SMALLER THAN 0.025.

DIM	INCHES	
	MIN	MAX
A	0.985	0.995
B	0.985	0.995
C	0.165	0.180
E	0.090	0.110
F	0.013	0.019
G	0.050 BSC	
H	0.026	0.032
J	0.020	—
K	0.025	—
R	0.950	0.956
U	0.950	0.956
V	0.042	0.048
W	0.042	0.048
X	0.042	0.056
Y	—	0.020
Z	2° 10°	
G1	0.910	0.930
K1	0.040	—