

**DESCRIPTION/ APPLICATION**

The Thomas & Betts Surface Attached Module Connectors offer a simple and effective method for densely packaging memory and/or logic in a mother/daughter board configuration. The SAM System offers high pin count low profile, low insertion force housings to permit the maximum possible packaging density. The overall concept of the SAM System makes it an excellent choice for many applications:

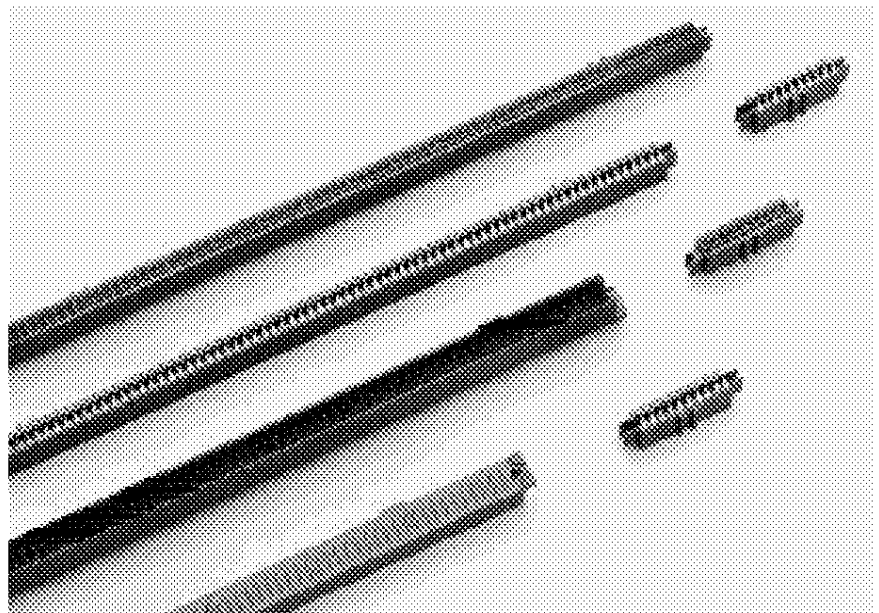
- Add-On Memory
- Bus Termination
- System Enhancements

The straddle mount architecture of the female connector permits surface mounted components to be used on both sides of the printed circuit board doubling the effective density of the system.

**DESIGN ADVANTAGES**

- Available in multiple sizes from 20 to 160 positions.
- Integral printed circuit board retention features on both male and female connectors.
- Solder posts lengths for 1.6 (.062) 2.4 (.093) and 3.2 (.125) thick printed circuit mother boards.
- Low insertion force — 1.75 ounce/ pin contact design facilitates easy field installations.
- Surface mounted female connector solder joints accessible for easy cleaning, inspection, rework and reflow.
- Coined and polished mating surfaces provide optimal contact interface.
- Bullet nosed pin tips and preloaded female contact beams result in very low insertion forces 1.75 ounces/ pin.

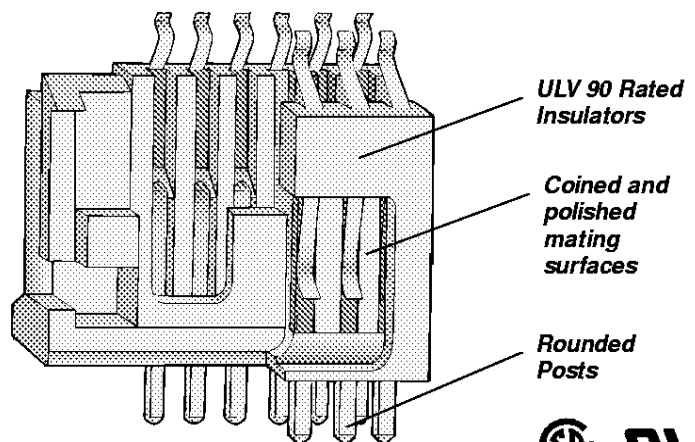
**SURFACE ATTACHED  
MODULE CONNECTORS  
THE SAM SYSTEM  
20-160 POSITIONS**



**ALSO AVAILABLE**

In addition to the configurations listed in this catalog, others are available. Please contact Thomas & Betts for more information on

different numbers of contacts, special plating requirements and other modifications.



LR49571 E60980

### SURFACE ATTACHED MODULE STRAIGHT MALE SAM PCB CONNECTORS 30-160 POSITIONS WITH INTEGRAL PCB RETENTION FEATURE



#### PHYSICAL PROPERTIES

INSULATION MATERIAL: Glass filled thermoplastic rated UL 94V-0

COLOR: Black

CONTACTS: Copper alloy, nickel plate overall, 30 microinches gold finish in contact zone

#### ELECTRICAL PROPERTIES

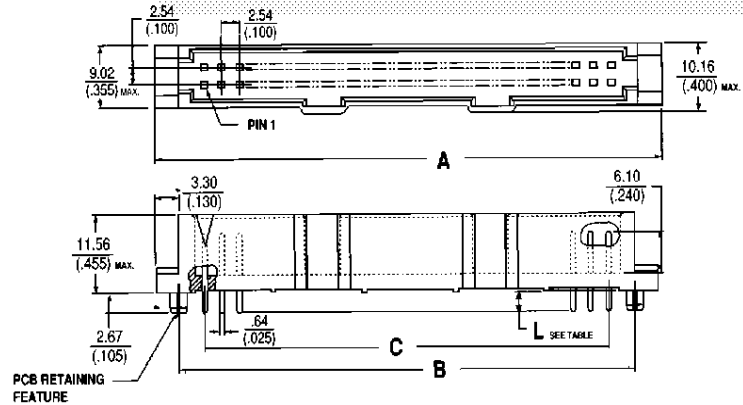
CURRENT RATING: 1 Amp

INSULATION RESISTANCE: > 1 x 10<sup>9</sup> Ohms

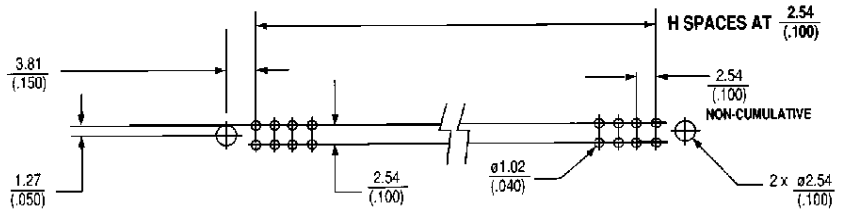
DIELECTRIC STRENGTH: > 1000 VDC at sea level

#### ENVIRONMENTAL PROPERTIES

TEMPERATURE RATING: -55°C TO 125°C



#### Recommended Printed Circuit Board Layout



#### Ordering Information

NO. OF POSITIONS	PART NUMBER SPECIFY X	A	B	C	H	X	L POST LENGTH	RECOMMENDED PCB THICKNESS RANGE
20	SAM020P-0X1-2	37.08 (1.460)	30.48 (1.200)	22.86 (.900)	9	2	2.80 (.110)	1.2 - 2.0 (.047 - .077)
30	SAM030P-0X1-2	49.78 (1.960)	43.18 (1.700)	35.56 (1.400)	14	3	4.40 (.173)	2.8 - 3.6 (.110 - .140)
34	SAM034P-0X1-2	54.86 (2.160)	48.26 (1.900)	40.64 (1.600)	16	4	3.40 (.135)	2.0 - 2.8 (.078 - .109)
40	SAM040P-0X1-2	62.48 (2.460)	55.88 (2.200)	48.26 (1.900)	19			
44	SAM044P-0X1-2	67.56 (2.660)	60.96 (2.400)	53.34 (2.100)	21			
50	SAM050P-0X1-2	75.18 (2.960)	68.58 (2.700)	60.96 (2.400)	24			
56	SAM056P-0X1-2	82.80 (3.260)	76.20 (3.000)	68.58 (2.700)	27			
60	SAM060P-0X1-2	87.88 (3.460)	81.28 (3.200)	73.66 (2.900)	29			
64	SAM064P-0X1-2	92.96 (3.660)	86.36 (3.400)	78.74 (3.100)	31			
72	SAM072P-0X1-2	103.12 (4.060)	96.52 (3.800)	88.90 (3.500)	35			
80	SAM080P-0X1-2	113.28 (4.460)	106.68 (4.200)	99.06 (3.900)	39			
86	SAM086P-0X1-2	120.90 (4.760)	114.30 (4.500)	106.68 (4.200)	42			
100	SAM100P-0X1-2	138.68 (5.460)	132.08 (5.200)	124.46 (4.900)	49			
110	SAM110P-0X1-2	151.38 (5.960)	144.78 (5.700)	140.66 (5.400)	54			
120	SAM120P-0X1-2	164.08 (6.460)	157.48 (6.200)	149.86 (5.900)	59			
130	SAM130P-0X1-2	176.78 (6.960)	170.18 (6.700)	162.56 (6.400)	64			
140	SAM140P-0X1-2	189.48 (7.460)	182.88 (7.200)	175.26 (6.900)	69			
150	SAM150P-0X1-2	202.18 (7.960)	195.58 (7.700)	187.96 (7.400)	74			
156	SAM156P-0X1-2	209.80 (8.260)	203.20 (8.000)	195.58 (7.700)	77			
160	SAM160P-0X1-2	214.88 (8.460)	208.28 (8.200)	200.66 (7.900)	79			

e.g. SAM160P-041-2

**SURFACE ATTACHED MODULE  
STRADDLE MOUNTED SAM  
FEMALE CONNECTORS 30-160 POSITIONS  
WITH INTEGRAL PCB  
RETENTION FEATURE**



**PHYSICAL PROPERTIES**

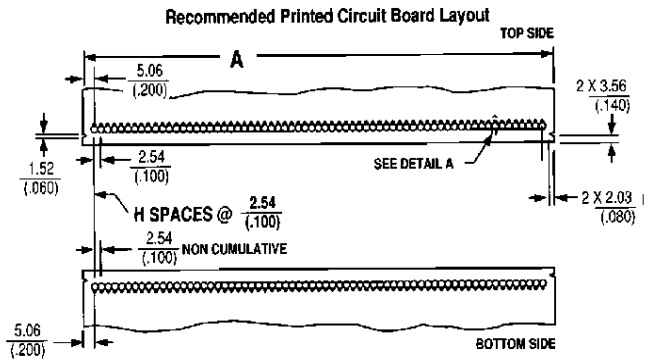
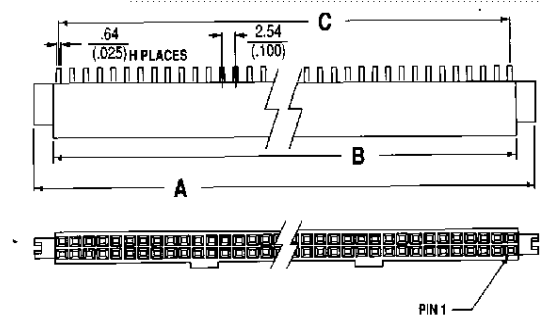
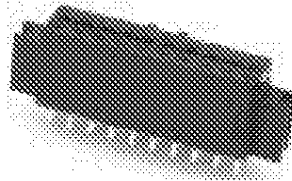
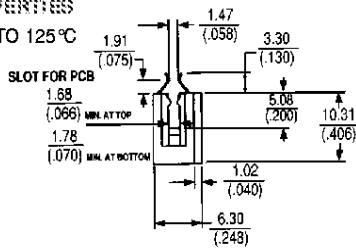
INSULATION MATERIAL: Glass filled thermoplastic  
rated UL 94V-0  
COLOR: Black  
CONTACTS: Copper alloy, nickel plate overall,  
30 microinches gold finish in contact zone,  
tin/lead on solder tails

**ELECTRICAL PROPERTIES**

CURRENT RATING: 1 Amp  
INSULATION RESISTANCE: > 1 x 10<sup>9</sup> Ohms  
DIELECTRIC STRENGTH: > 1000 VDC at sea level

**ENVIRONMENTAL PROPERTIES**

TEMPERATURE RATING: -55°C TO 125°C



**Ordering Information**

NO. OF POSITIONS	PART NUMBER	A	B	C	H
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34	SAM034S-011-2	54.86 (2.160)	48.26 (1.900)	40.64 (1.600)	16
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44	SAM044S-011-2	67.56 (2.660)	60.96 (2.400)	53.34 (2.100)	21
50	SAM050S-011-2	75.18 (2.960)	68.58 (2.700)	60.96 (2.400)	24
56	SAM056S-011-2	82.80 (3.260)	76.20 (3.000)	68.58 (2.700)	27
60	SAM060S-011-2	87.88 (3.460)	81.28 (3.200)	73.66 (2.900)	29
64	SAM064S-011-2	92.96 (3.660)	86.36 (3.400)	78.74 (3.100)	31
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100	SAM100S-011-2	138.68 (5.460)	132.08 (5.200)	124.46 (4.900)	49
110	SAM110S-011-2	151.38 (5.960)	144.78 (5.700)	140.66 (5.400)	54
120	SAM120S-011-2	164.08 (6.460)	157.48 (6.200)	149.86 (5.900)	59
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156	SAM156S-011-2	209.80 (8.260)	203.20 (8.000)	195.58 (7.700)	77
160	SAM160S-011-2	214.88 (8.460)	208.28 (8.200)	200.66 (7.900)	79

