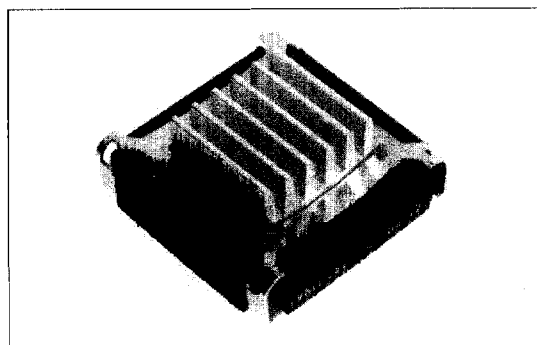
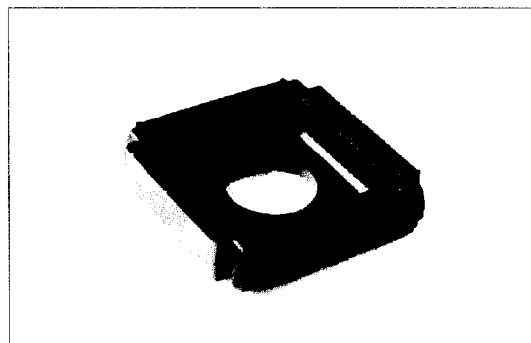


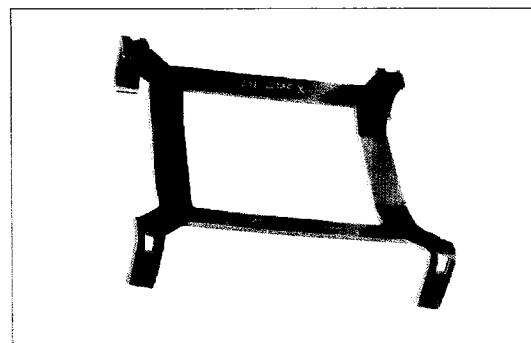
INTRODUCTION



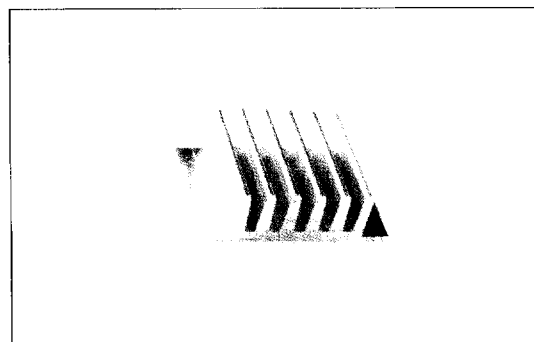
Socket for ceramic lead less
chip carrier, assembly:



Socket



Spring latch

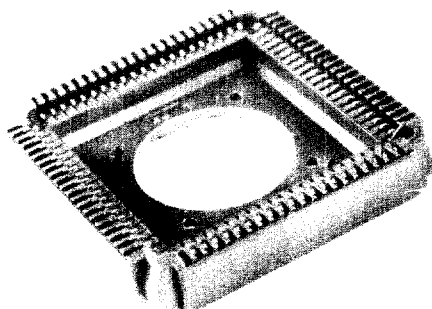


Heat sink

DESCRIPTION

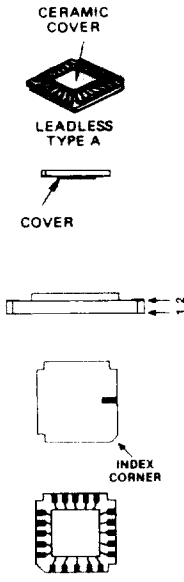
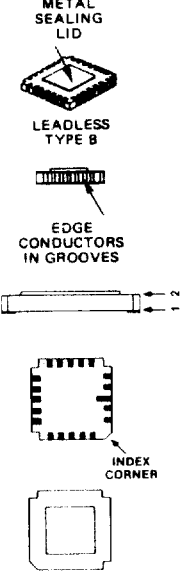
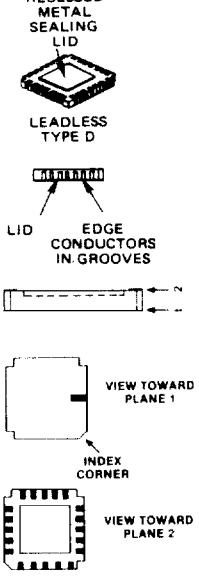
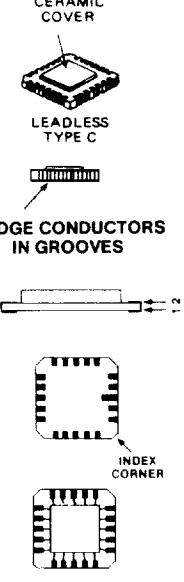
- Will accept type A, B, C or D ceramic chip carrier in accordance with JEDEC standard.
- Available in 28, 44, 52, 68, 84 and 124 way arrangements.
- Low profile overall height will not exceed 7.8 mm for chip carrier up to 2.1 mm thick.
- Improved heat dissipation by means of a heat sink.
- Spring latch attachment mechanism is operated by simple pressure action.
- Removal is achieved by lifting latch tabs with a screw driver.
- Incorporates guide pins to assist positioning on PCB.
- Termination methods:
 - Dip solder:
 - 2 row dip solder 2.54 mm (.1 in) pitch
 - single row dip solder 1.27 mm (.05 in) pitch.
 - 2 lengths available for 1.6 mm (.062 in) and 3.2 mm (.125 in) thick PCB.
 - Surface mount:
 - Solder terminations are accessible for easy inspection and repair.
- Easy access for electrical test probe checks.
- Packaging provides support for dip solder tails.

Description

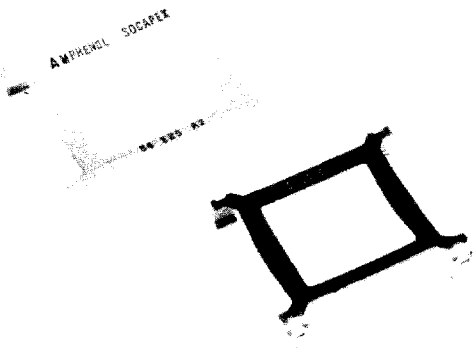


Complete range of high reliability chip carrier sockets conforming to JEDEC standard types A, B, C or D.

- Dielectric: glass filled thermoplastic.
- Contacts: copper alloy, gold plated in contact area.
- 6 sizes: 28, 44, 52, 68, 84, 124 contact variants.
- 2 types of polarization: A for ceramic leadless chip carriers type A, B and D,
C for ceramic leadless chip carrier type C.
- 3 termination styles: Y dip solder for 3.2 mm (.125 in) PCB's,
Y1 dip solder for 1.6 mm (.062 in) PCB's,
TV surface mount, with termination inspection and repair facilities.

Ceramic leadless chip carriers conforming to JEDEC standard.	 LEADLESS TYPE A COVER INDEX CORNER type A	 METAL SEALING LID LEADLESS TYPE B EDGE CONDUCTORS IN GROOVES INDEX CORNER type B	 RECESSED METAL SEALING LID LEADLESS TYPE D EDGE CONDUCTORS IN GROOVES VIEW TOWARD PLANE 1 INDEX CORNER VIEW TOWARD PLANE 2 type D	 CERAMIC COVER LEADLESS TYPE C EDGE CONDUCTORS IN GROOVES INDEX CORNER type C
Socket polarization	type A	type A	type A	type C

Description



The retention mechanism is designed to maintain a uniform contact pressure on the ceramic chip carrier. Spring latches are available in 5 material thicknesses to suit a range of single and double sided chip carriers.

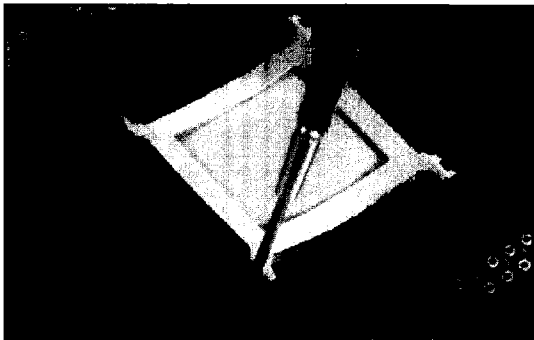
- Stainless steel.
- 6 sizes: 28, 44, 52, 68, 84, 124 contact sockets.
- 5 thicknesses to suit range of chip carriers.
- Electrically insulated spring latches available.

Locking



Apply uniform pressure at diagonal corners, repeat this operation for other corners.

Unlocking



Use screw driver or suitable tool to lift spring and release tabs, progressively, at each corner.

Chip carrier thickness	Non insulated spring latch for single sided LLCC		Insulated spring latch for double sided LLCC	
	28 way	44 to 124 way	28 way	44 to 124 way
0.8 to 1.2 mm				E10A2
1.3 to 1.7 mm		E15A1	E15A2	E15A2
1.7 to 2.1 mm	E19A1	E19A1	E19A2	E19A2
2.2 to 2.6 mm	E25A1	E25A1		E25A2
2.7 to 3.3 mm		E32A1		
3.4 to 3.7 mm			E37A2	E37A2
3.8 to 4.2 mm	E42A1	E42A1		

When a convection heat sink is used, add 0.8 mm (.031 in) to the ceramic leadless chip carrier thickness.

Socket for Ceramic Leadless Chip Carrier

LC2S

How to order

Socket

Number of contacts: 028-044-052-068-084-124

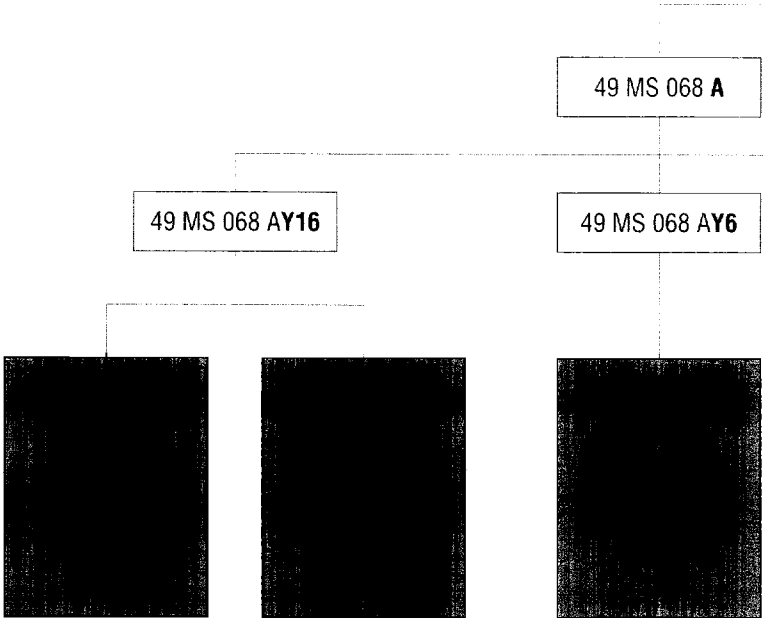
Polarization: type A or C (see page 4)

Termination styles:

- Y1 : dip solder for 1.6 mm (.062 in) PCB's
- Y : dip solder for 3.2 mm (.125 in) PCB's
- TV : surface mount, with termination inspection and repair facilities
- 6 : standard plating

- A : 2 row dip solder
2.54 mm (.1 in) pitch
- B : single row dip solder or surface mount
1.27 mm (.05 in) pitch

Socket P/N
(without spring latch)



Spring latch

Spring latch P/N
(without heat sink)

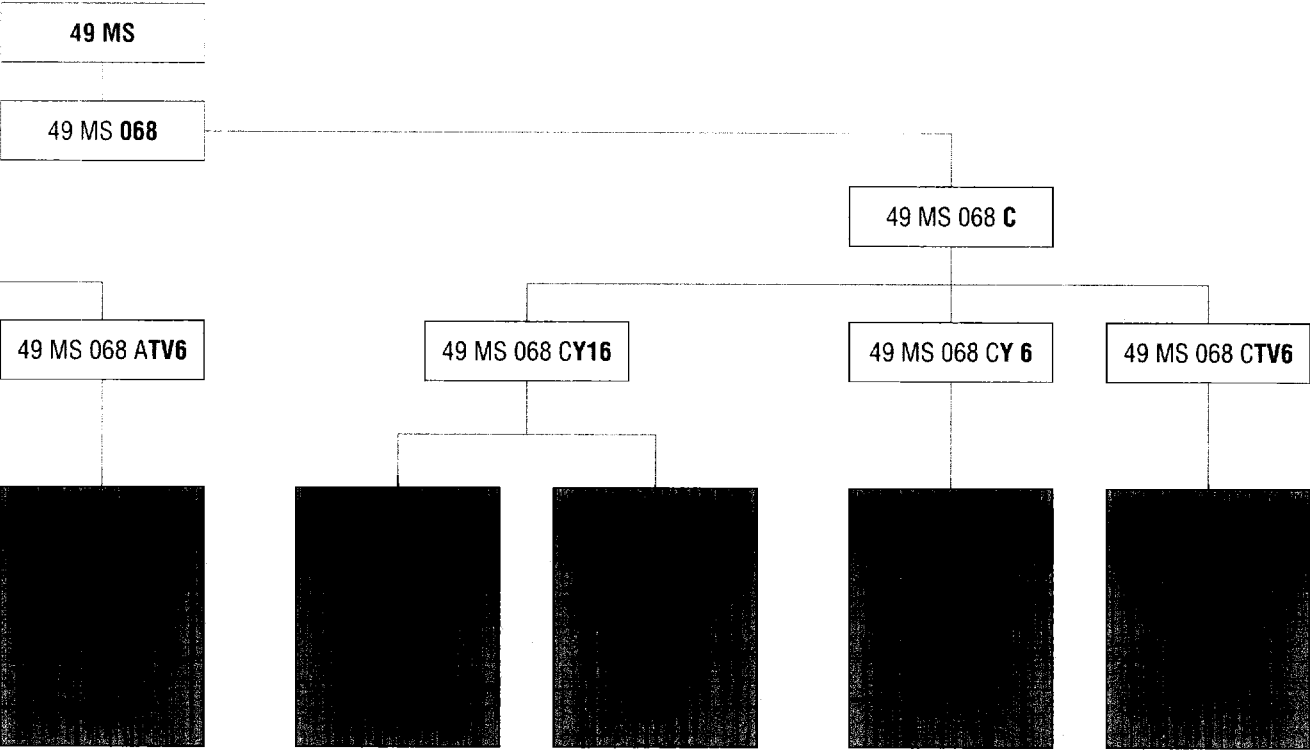
L.L.C.C thickness	Reference			
	Non insulated spring latch for single sided L.L.C.C		Insulated spring latch for double sided L.L.C.C	
	28 way	44 to 124 way	28 way	44 to 124 way
0.8 to 1.2 mm				E17A2
1.3 to 1.7 mm		E15A1	E15A2	E15A3
1.7 to 2.1 mm	E19A1	E19A1	E19A2	E19A3
2.2 to 2.6 mm	E23A1	E23A1		E23A1
2.7 to 3.3 mm		E27A1		
3.4 to 3.7 mm			E27A2	E27A1
3.8 to 4.2 mm	E24A1	E12A1		

When a convection heat sink is used, add .8 mm (.031 in) to the ceramic leadless chip carrier thickness.
How to order heat dissipation system by convection (see page 12).

LC2S complete P/N

The addition of spring latch reference to socket reference gives the complete P/N.





LLCC type			Recommended socket		
EF6840EM EF6850EM EF6852EM MR8251A	EF68A40EM EF68A50EM EF6854EM MR8254	MR8259	49 MS 028 CY 6A E19A1	or 49 MS 028 CY1 6A E19A1	or 49 MS 028 CTV 6B E19A1
EF6800EM EF6809EM	EF6802EM EF6821EM		49 MS 044 CY 6A E19A1	or 49 MS 044 CY1 6A E19A1	or 49 MS 044 CTV 6B E19A1
8051AH/31AH 80C86	8052AH/32AH EF68A40EM		49 MS 044 CY 6A E19A1	or 49 MS 044 CY1 6A E19A1	or 49 MS 044 CTV 6B E19A1
HMC4 6207 87C51 MR80C31BH		MR80C51BH	49 MS 044 CY 6A E19A1 49 MS 044 CY 6A E25A1	or 49 MS 044 CY1 6A E19A1 or 49 MS 044 CY1 6A E25A1	or 49 MS 044 CTV 6A E19A1 or 49 MS 044 CTV 6A E25A1
80186 80188	80C186 80C188		49 MS 052 AY 6A E25A1	or 49 MS 052 AY1 6A E25A1	or 49 MS 052 ATV 6B E25A1
TS68000ME8/ME10/ME12 TS68230ME10 TS68483			49 MS 068 CY 6A E19A1 49 MS 068 CY 6A E25A1	or 49 MS 068 CY1 6A E19A1 or 49 MS 068 CY1 6A E25A1	or 49 MS 068 CTV 6A E19A1 or 49 MS 068 CTV 6A E25A1
R8796BH 87C196KB		R8797BH	49 MS 068 AY 6A E25A1	or 49 MS 068 AY1 6A E25A1	or 49 MS 068 ATV 6A E25A1
MC68000 NS32032C		TI32032T-2	49 MS 068 CY 6A E32A1 49 MS 068 AY 6A E19A1	or 49 MS 068 CY1 6A E32A1 or 49 MS 068 AY1 6A E19A1	or 49 MS 068 CTV 6B E32A1 or 49 MS 068 CTV 6B E19A1
EF6840EM MA2700	SCX6244 SCX6287 MA5000		49 MS 084 AY 6A E19A1	or 49 MS 084 AY1 6A E19A1	or 49 MS 084 ATV 6A E19A1

Technical characteristics conforming to:

- MIL S 38533
- French standard NFC/UTE 93404

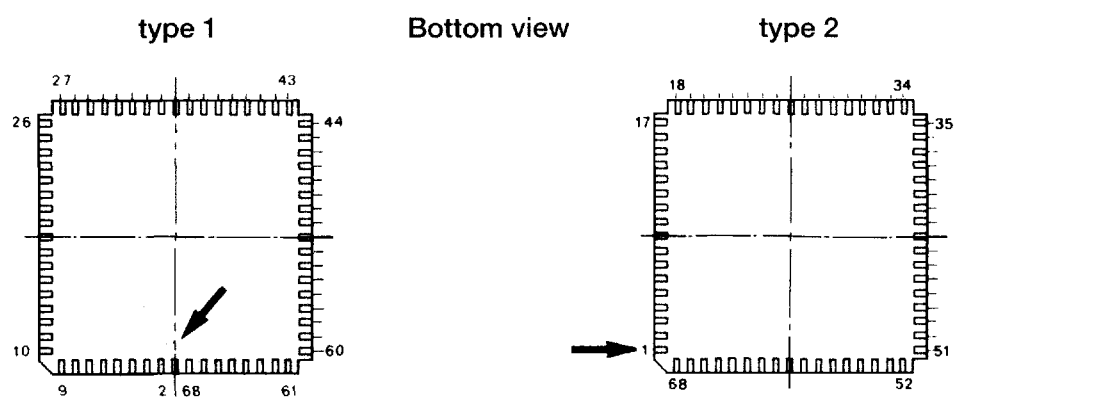
Mechanical endurance	> 100 cycles
Contact retention force	> 1 N
Vibrations MIL STD 1344A method 2005-1 condition 3	
<i>frequency range</i>	10 - 2000 Hz
<i>amplitude</i>	1,5 mm (.059 in), peak to peak : 3 mm (.118 in)
<i>acceleration</i>	15 gn
<i>number of axis</i>	3
<i>time</i>	12 hours (4h per axis)
<i>electrical discontinuity</i>	< 20 ns
Shock MIL STD 1344A method 2004 condition C	
<i>acceleration</i>	100 gn
<i>pulse duration</i>	6 ms
<i>electrical discontinuity</i>	< 20 ns
3 successive shocks in the 2 axis, in the 3 tri rectangular directions	

Withstanding voltage	600 V rms
Contact resistance	≤ 20 mΩ
Insulation resistance	> 10 ⁵ MΩ

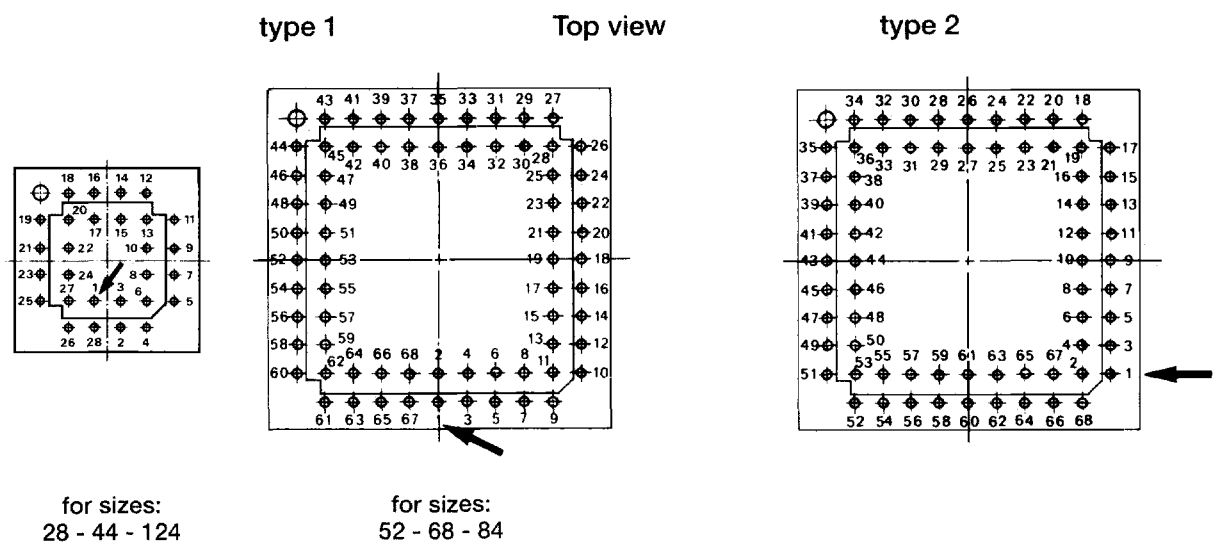
Climatic category: 435	-55° C to + 125° C - 21 days
Corrosive environment	MIL STD 202 method 208
Rapid change of temperature	-55° C to + 125° C - 5 cycles
	MIL STD 1344A method 1003

Contact arrangements

The following examples are for type A chip carriers and sockets with 68 contacts. Orientation principle is the same for all sizes (28, 44, 52, 68, 84, 124) also for all polarization styles (A, B, C or D).



• 2 row dip solder



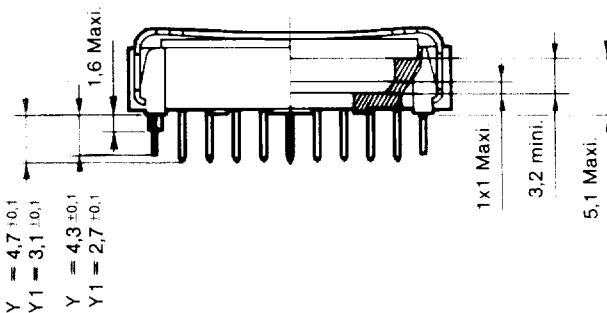
• single row - Dip solder / Surface mount.
same orientation as for ceramic leadless chip carrier.

Socket for Ceramic Leadless Chip Carrier

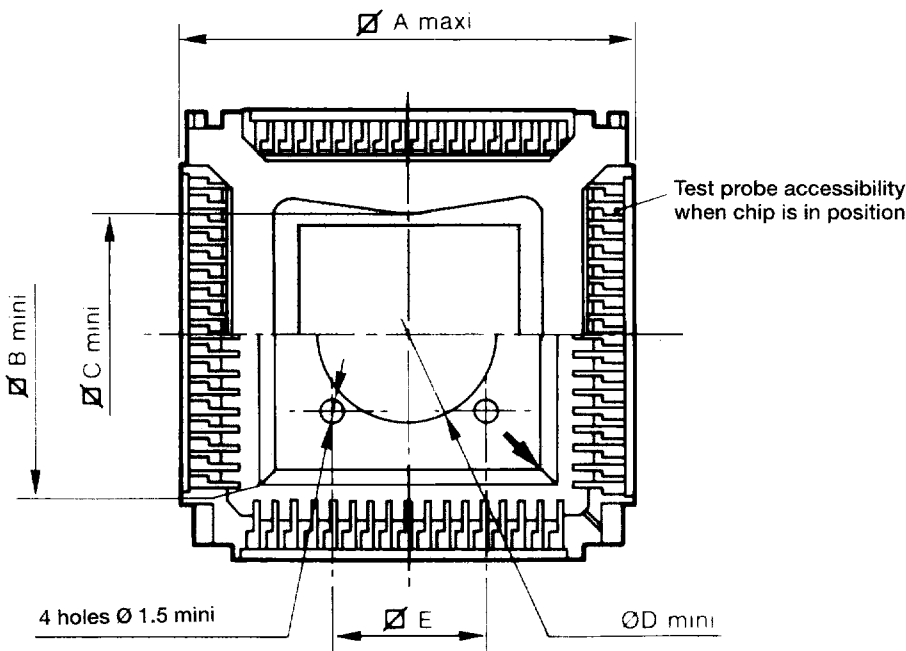
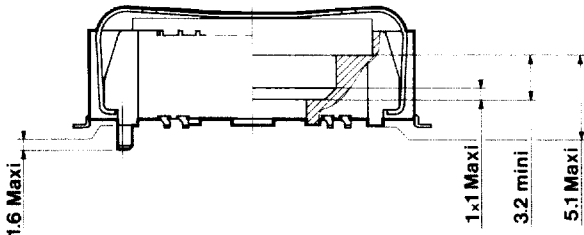
LC2S

Dimensions

Dip solder



Surface mount

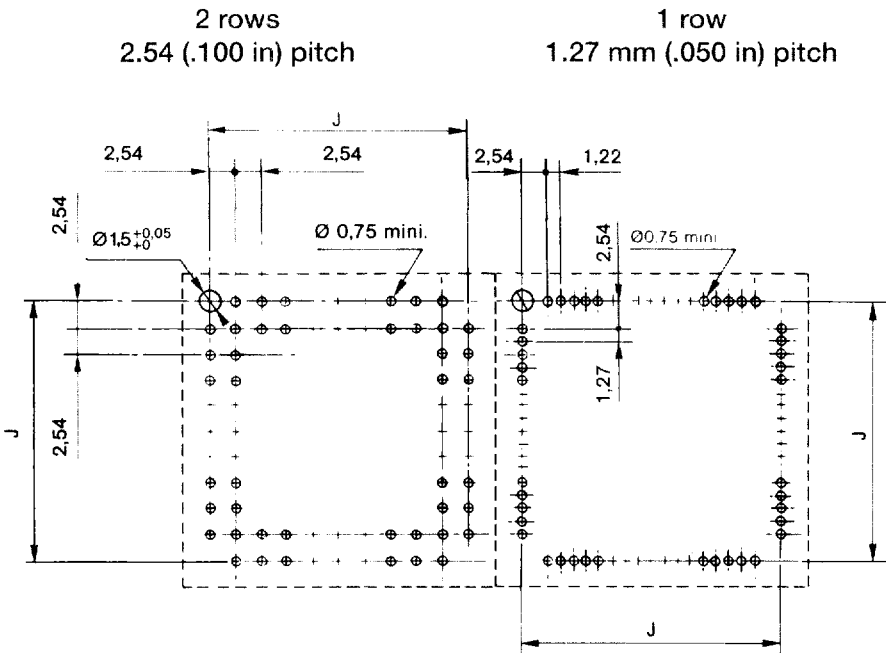
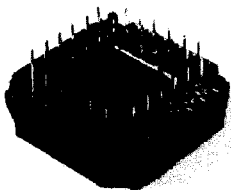


cts	A mm in	B mm in	C mm in	D mm in	E mm in
28	17.72 .697	8.17 .321	8.40 .330	5.00 .196	—
44	22.80 .897	13.25 .521	9.80 .385	8.00 .314	7.62 .300
52	25.34 .997	15.79 .621	10.55 .415	10.50 .413	10.16 .400
68	30.40 1.196	20.20 .795	17.30 .681	12.00 .472	10.16 .400
84	35.50 1.397	25.28 .995	21.75 .856	17.10 .673	15.24 .600
124	49.00 1.929	29.95 1.179	24.00 .944	21.00 .826	20.32 .800

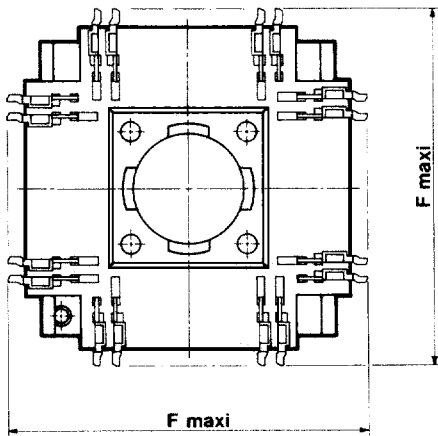
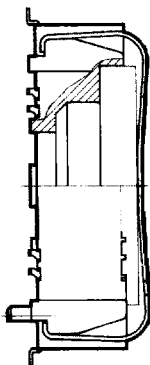
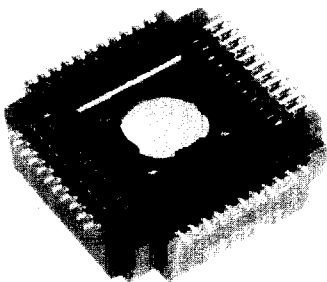
	E15A1 E10A2	E19A1 E15A2	E25A1 E19A2	E32A1 E25A2	E42A1 E37A2
X	7.4 .291	7.8 .307	8.4 .330	9.1 .358	10.1 .397

PCB mounting details

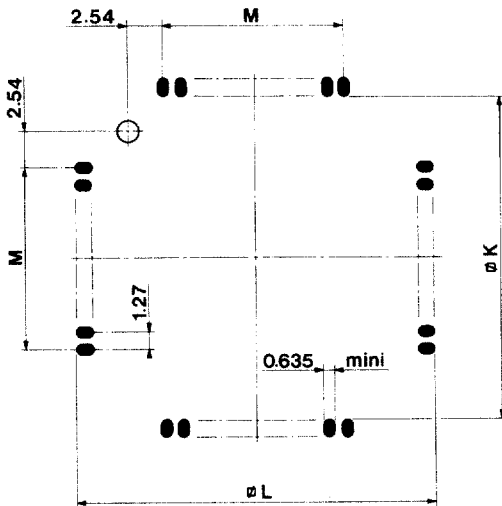
Dip solder



Surface mount



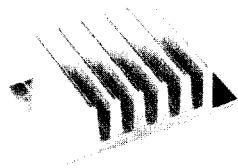
cts	J mm in	K mm in	L mm in	M mm in	F mm in
28	12.70 .500	17.78 .700	20.32 .800	7.62 .300	20.16 .794
44	17.78 .700	22.86 .900	25.40 1.000	12.70 .500	25.34 .998
52	20.32 .800	25.40 1.000	27.94 1.100	15.24 .600	27.78 1.093
68	25.40 1.000	30.48 1.200	33.02 1.300	20.32 .800	32.86 1.294
84	30.48 1.200	35.56 1.400	38.10 1.500	25.40 1.000	37.94 1.493
124	43.18 1.700	48.26 1.900	50.80 2.000	38.10 1.500	50.64 1.994



Socket for Ceramic Leadless Chip Carrier

Heat Sink

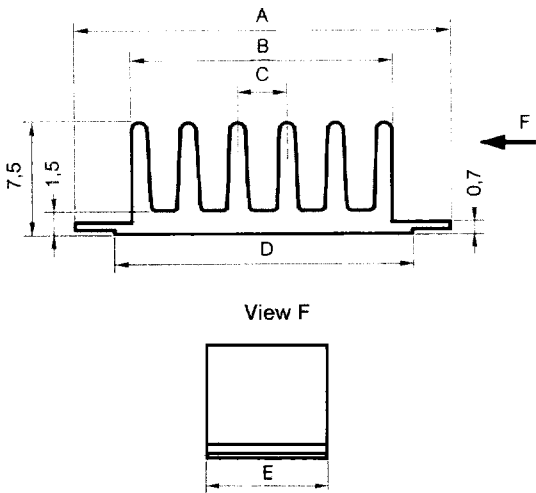
Description



Heat dissipation system by convection:
Designed to achieve efficient thermal
conduction from surface of chip carrier.

		Surface finish	
		00: without plating	02: black anodised
Socket sizes	28	49 MRV 028 E08 00	49 MRV 028 E08 02
	44	49 MRV 044 E08 00	49 MRV 044 E08 02
	52	49 MRV 052 E08 00	49 MRV 052 E08 02
	68	49 MRV 068 E08 00	49 MRV 068 E08 02
	84	49 MRV 084 E08 00	49 MRV 084 E08 02
	124	49 MRV 124 E08 00	49 MRV 124 E08 02

E08: heat dissipation system thickness = 0.8 mm (.031 in).
Note: Please, add 0.8 mm (.031 in) to the LLCC thickness when selecting a spring latch.



cts	fins	A mm in	B mm in	C mm in	D mm in	E mm in
28	3	12.0 .472	8.3 .326	3.65 .143	7.0 .275	8.3 .326
44	3	17.1 .673	9.7 .381	4.35 .171	9.6 .476	9.7 .381
52	4	19.6 .771	11.8 .464	3.60 .141	14.6 .574	11.8 .464
68	6	24.8 .976	16.9 .665	3.20 .125	19.8 .779	16.9 .665
84	7	29.8 1.173	21.7 .854	3.45 .135	24.8 .976	21.7 .854
124	8	32.0 1.259	24.0 .944	3.30 .129	—	24.0 .944