

### The LPCC Package

This patent pending plastic package was developed by ASAT Ltd. in 1998 and is the first in the **KESTRAL** family. The body style introduces a "leadless" concept into ASAT's expanding portfolio. The LPCC package is a superior choice for high speed applications where electrical performance is paramount and space constraints are unavoidable. The unique design eliminates reliability concerns that plague some other product families.

### Typical Applications

- ASICs, DSP, ASSP
- High Speed Networks
- Personal Digital Assistants

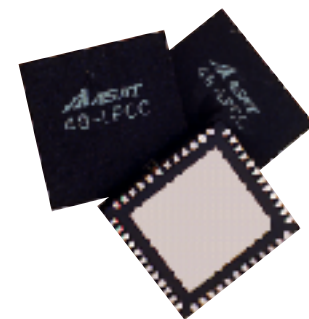
The LPCC is constructed with standard materials and can be custom designed to meet your IC's special requirements.

### Advantages

- High degree of flexibility in custom designs
- 10 day design lead-time including leadframe
- Standard net list for most ICs
- Immune to die shrink
- Lowest stress at solder joint compared to CSP & Flex packages
- Very low inductance for high speed applications
- Die pad soldering allows for excellent thermal performance

### Features

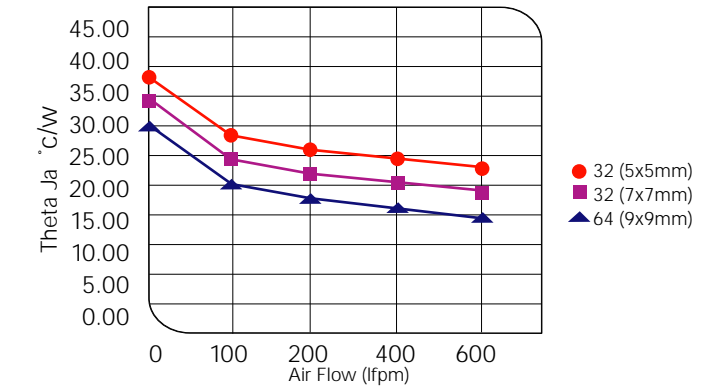
- Body sizes: 3 to 9mm.
- Lead counts from 8 and 64
- Standard assembly materials, equipment and processes
- Ground plane bonding option



### Typical Configurations

Body Size	Lead Count	Pitch	Die Pad
3 x 3	8	0.65	1.8 x 1.8
	12	0.50	
	16	0.50	
4 x 4	12	0.65	2.8 x 2.8
	16	0.65	
	20	0.50	
	24	0.50	
4 x 5	24	0.50	2.8 x 3.8
	28	0.50	
5 x 5	20	0.65	3.8 x 3.8
	24	0.65	
	28	0.50	
	32	0.50	
5 x 7	38	0.50	3.8 x 5.8
6 x 6	24	0.65	4.8 x 4.8
	28	0.65	
	32	0.65	
	36	0.50	
	40	0.50	
7 x 7	32	0.65	5.8 x 5.8
	36	0.65	
	40	0.50	
	44	0.50	
	48	0.50	
8 x 8	36	0.65	6.8 x 6.8
	40	0.65	
	44	0.65	
	48	0.50	
	52	0.50	
9 x 9	44	0.65	7.8 x 7.8
	48	0.65	
	56	0.50	
	60	0.50	
	64	0.50	

### Thermal



### Standard Materials

Leadframe	Copper
Leadframe Finish	85% Sn / 15% Pb
Die Attach	Conductive Epoxy
Bond Wire	Gold
Mold Compound	Epoxy Resin
Marking	Laser

### Reliability

Preconditioning	Level 1
Autoclave, 121°C	168 Hours
Temp Cycle, cond. C	500/1000 cycles
Thermal Shock, cond. D	100 cycles
HAST, 130°C	96 Hours
HTSL, 150°C	1000 Hours

### Performance

Electrical	
Typical Package:	32 lead LPCC 5x5mm
Total capacitance (pF)	0.13
Self Inductance (nH)	1.17- 1.19
Mutual Inductance (nH)	0.63 - 0.65
Thermal	
Basis	Conduction via Die Attach pad
Conditions	1.0watt, 0 airflow, 1s2p Board
Typical Package	Theta Ja = 31.7°C/w

