



Standard Outline Transistor (SOT23) and Single Chip (SC70) Packages:

Amkor's 1.0 mm thick, 5, 6, and 8 lead SOT23 and 5 and 6 lead SC70 packages offer gullwing lead, subminiature, SMT performance characteristics. These packages are high-density leadframe (HDLF) strip-assembled in densities up to 400 units per strip and are processed in an integrated line from die attach through tape and reel for maximum cost effectiveness.

Applications:

This Amkor exclusive technology provides a low-cost packaging solution particularly well suited for wireless/RF and analog devices, as well as ultra thin hand-held portable products such as cell phones, data storage systems, notebook computers and pagers.

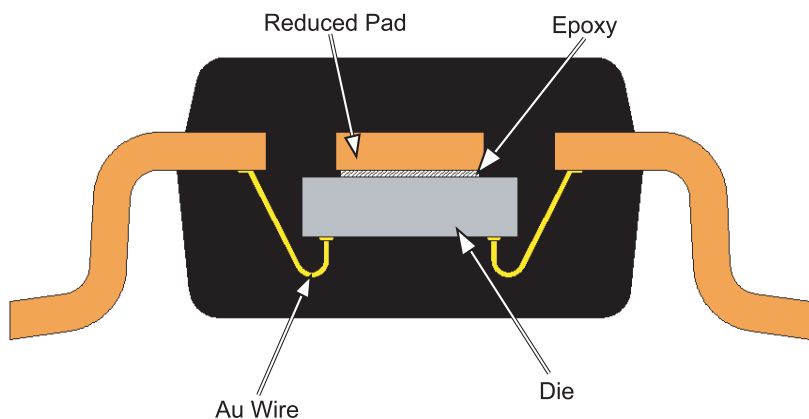
SOT / SC

Features:	Amkor's SOT / SC packages offer: <ul style="list-style-type: none"> • JEDEC and EIAJ compliant body sizes • Available in 5, 6 and 8 lead for SOT23 and 5 and 6 lead for SC70 • 1.0 mm total package height • Manufactured in high density leadframes for lowest cost • 0.005" Copper leadframes for strength and thermal advantages 																																																						
Thermal Resistance:	<table border="1"> <thead> <tr> <th>Pkg Type</th> <th>L/F</th> <th>D/A</th> <th>EMC</th> <th>Die size (mil)</th> <th>Theta JA (°C/W) 1S board</th> <th>Theta JA (°C/W) 1S2P board</th> </tr> </thead> <tbody> <tr> <td>SOT23</td> <td>C194</td> <td>Epoxy</td> <td>MP8000CH4</td> <td>39 x 46</td> <td>301.2</td> <td>195.8</td> </tr> <tr> <td>SOT23 fused</td> <td>C194</td> <td>Epoxy</td> <td>MP8000CH4</td> <td>39 x 46</td> <td>283.9</td> <td>178.9</td> </tr> <tr> <td>SC70</td> <td>C194</td> <td>Epoxy</td> <td>MP8000CH4</td> <td>20 x 30</td> <td>426.1</td> <td>293.9</td> </tr> <tr> <td>SC70 fused</td> <td>C194</td> <td>Epoxy</td> <td>MP8000CH4</td> <td>20 x 30</td> <td>406.7</td> <td>271.3</td> </tr> </tbody> </table>	Pkg Type	L/F	D/A	EMC	Die size (mil)	Theta JA (°C/W) 1S board	Theta JA (°C/W) 1S2P board	SOT23	C194	Epoxy	MP8000CH4	39 x 46	301.2	195.8	SOT23 fused	C194	Epoxy	MP8000CH4	39 x 46	283.9	178.9	SC70	C194	Epoxy	MP8000CH4	20 x 30	426.1	293.9	SC70 fused	C194	Epoxy	MP8000CH4	20 x 30	406.7	271.3	Package mounted to single (1S) and multi-layer (1S2P) JEDEC board, horizontal orientation																		
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Reliability:	Amkor subjects their SOT / SC packages to high level testing to assure reliable performance. <ul style="list-style-type: none"> • Moisture Sensitivity Characterization <ul style="list-style-type: none"> JEDEC Level 1 85 °C / 85%, 168 hrs JEDEC Level 2 85 °C / 65%, 168 hrs • PCT w/o precon 121 °C / 100%RH / 2 atm, 168 hrs • High temp storage +175 °C, 500 hours • Temp Cycle -65 °C / +150 °C, 500 cycles • Un-biased HAST 130 °C / +85 °C, 96 hours 																																																						

SOT / SC

Cross-section SOT / SC

SOT23 / SC70 Die Down



Process Highlights

Die Thickness (max)	8 mil
Bond Pad Pitch	=/> 3.1 mil
Wafer Map	Capable
Wafer Backgrinding	Available
Solder Plate	85/15 Sn Pb or 100% Sn
Mark Process	Laser
Lead Inspection	Optical
Pack	Tape & Reel or Bulk

Standard Materials

Standard w/PB	
Leadframe Alloy	Copper (C194)
Die Attach Material	84-1LMISR4
Gold Wire	0.8 mil diameter
Molding Compound	NITTO 8000 CH4
Lead Finish	85/15 solder (Sn/Pb) plate
Green Material Standard	
Leadframe Alloy	Copper (C194)
Die Attach Material	8290
Gold Wire	0.8 mil diameter
Molding Compound	Sumitomo G600
Lead Finish	100% Matte Tin

Test Services

- Program generation/conversion
- Product engineering
- Wafer sort
- Ambient to +165 °C test available
- Burn-in
- Tape and Reel services

Shipping

Aluminum Canister	40 x 95 mm
Tape and Reel	

Configuration Options:

SOT / SC Nominal Package Dimensions (units in mm)

Body Size	Lead Count	Body Thkns	Body Length	Lead Pitch	Leadform	Standoff	Theoretical Min/Max Die size	Amkor P/O Dwg#	JEDEC Dwg#
SOT23									
1.6	5	0.88	2.9	0.95	0.575	0.075	0.25 - 1.13 x 1.6	41211	MO-178B
1.6	6	0.88	2.9	0.95	0.575	0.075	0.25 - 0.94 x 1.6	41211	MO-178B
1.6	8	0.88	2.9	0.65	0.575	0.075	0.25 - 0.94 x 1.6	41211	MO-178B
SC70									
1.3	5	0.88	2.0	0.65	0.4	0.075	0.25 - 0.84 x 1	41223	MO-223A
1.3	6	0.88	2.0	0.65	0.4	0.075	0.25 - 0.84 x 1	41223	MO-223A