

## ANSWER SHEET to SMT Package IQ Test

We hope you enjoyed taking the SMT Package IQ Test



Question	Correct Answer
Q1. Which package does not have J-Leads?	a. PLCC b. SOJ <b>(c). SOP</b>
Q2. Which package does not have gull wing leads?	a. QFP <b>(b). BGA</b> c. TSOP
Q3. Which package does not belong to same group?	a. CSP <b>(b). QFP</b> c. BGA
Q4. Which package does not have 1.27mm lead pitch	<b>(a). SSOP</b> b. SOJ c. PLCC
Q5. Which pitch is not equal to the others?	a. 1.27mm <b>(b). 25 mils</b> c. 25.6 mils
Q6 Which uses a lead frame?	a. CSP <b>(b). BCC++</b> c. microBGA
Q7. Which package does "A1" refer to pin 1?	a. QFP b. PLCC <b>(c). BGA</b>
Q8. Which device uses 25 mil standard lead pitch?	a. MQFP b. TQFP <b>(c). BQFP</b>
Q9. Which package is 1.4mm thick?	<b>(a). LQFP</b> b. TQFP c. PQFP
Q10. Which chip is different from the others?	a. 0805 <b>(b). 1206</b> c. 2012
Q11. Which material is not used to make capacitors?	<b>(a). silicon</b> b. tantalum c. ceramic
Q12. Which chip device is the smallest?	a. 1005 <b>(b). 0201</b> c. 0402
Q13. Which component is the tallest?	<b>(a). Aluminum Cap</b> b. Molded Inductor c. MELF Resistor
Q14 Which device does not have 5 leads?	a. SOT-353 <b>(b). TO-252</b> c. SC74
Q15. Which device is the largest?	a. MSOP <b>(b). DPAK</b> c. SO-8

Question	Circle your Answer
Q16. Which device is dissimilar?	a. DO-213AB b. DO-213AA <b>(c). DO-214AA</b>
Q17. Which device has the longest leads?	<b>(a). PLCC</b> b. LCC c. QFN
Q18. Which device does not have a ceramic body?	a. CERDIP <b>(b). PLCC</b> c. LCC
Q19. Which package has leads extending from the narrow side?	a. TSSOP <b>(b). TSOP(I)</b> c. TSOP(II)
Q20. Which device has the smallest lead pitch available?	<b>(a). LQFP - 0.3mm</b> b. QFP c. QFN
Q21. Which is daisy chain?	<b>(a). 1-2, 3-4, 5-6, 7-8</b> b. 1,2,3,4,5,6,7,8 c. 1-1, 2-2, 3-3, 4-4
Q22. Which device has pin 1 located near a corner?	a. CERQUAD <b>(b). QFP</b> c. PLCC
Q23. Which device is available with the narrowest lead pitch?	a. CSP b. microBGA <b>(c). Flip-Chip</b>
Q24. Which device is available with liquid encapsulated top?	a. QFP b. Flip-Chip c. BGA
Q25. Which device is available in bulk cassette feeder boxes?	<b>(a). chip resistors</b> b. SMD diodes c. Flip-Chips
Q26. Which device is available with 0.75mm pitch?	a. QFP <b>(b). microBGA</b> c. TSOP
Q27. Which device is <u>not</u> available with 1.0mm lead pitch?	a. QFP <b>(b). TQFP</b> c. BGA
Q28. Which device is available with Sn96 leads?	<b>(a). BGA</b> b. PGA c. CGA
Q29. Which alloy melts at the highest temperature?	<b>(a). Sn10</b> b. Sn63 c. Sn96
Q30. Which device is not available with 304 leads?	a. BGA <b>(b). Mirror Wafer</b> c. QFP
Q31. Which device can be delivered in tubes?	<b>(a). BQFP</b> b. MQFP c. TQFP

Question	Circle your Answer
Q32. Which device is not readily supplied on tape and reel?	a. BGA b. QFP <b>(c). TO-5</b>
Q33. Which device is not mounted in sockets?	<b>(a). SOT-23</b> b. QFP c. PLCC
Q34. Which device is a throughhole component?	a. SOD-323 <b>(b). DO-35</b> c. DO-214AC
Q35. Which device is most often supplied in trays?	a. PLCC b. TSSOP <b>(c). TSOP</b>
Q36. What does Ko refer to?	a. Knock out factor <b>(b). Depth of pocket</b> c. Temp Coefficient
Q37. What diameter reel is most popular for packaging SOIC?	<b>(a). 13" (330mm)</b> b. 15" (380mm) c. 10" (254mm)
Q38. Which device has 8 leads?	a. DO-8 b. TO-8 <b>(c). TO-99</b>
Q39. Typical outside dimensions for JEDEC trays	a. 100mm x 100mm <b>(b). 136mm x 316mm</b> c. 316mm x 316mm
Q40. Which material is usually not found on SMD carrier reels	a. paper b. plastic <b>(c). metal</b>
Q41. MELF parts are	a. Round b. Better <b>(c). Cylindrical</b>
Q42. Chip resistors have	a. 3 leads <b>(b). 2 leads</b> c. 4 leads
Q43. What was the first SMT IC package developed?	a. SOIC b. PLCC <b>(c). Flat Pack</b>
Q44. Which dummy test vehicle is required for SIR testing?	a. Daisy-Chain <b>(b). Isolated</b> c. All leads connected
Q45. Which dummy test vehicle is required for continuity testing?	<b>(a). Daisy-Chain</b> b. Isolated c. Internal die
Q46. Which dummy test vehicle is required for temperature profiling?	a. Isolated package <b>(b). Internal die</b> c. Daisy-Chain
Q47. Benefit of cavity down Ball Grid Array Packages	<b>(a). Bigger heat spreader</b> b. Wire bonding is stronger c. Better TCE for soldering

Question	Circle your Answer
Q48. TCE mismatch typically results in what BGA failure first?	(a). Internal die delamination b. Over molding cracks c. Solder ball cracks
Q49. What precaution is used to minimize pop-corn affect?	(a). Bake parts prior to use b. Bake PCB prior to use c. Use solder paste
Q50. Most popular QFP body shape	a. Rectangular b. Round (c). Square

**We hope you scored well on our SMT Package IQ Test.**

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