



Gold (Au) Wire Bondability  
Quick Summary

Tel (800) 776-9888    www.TopLine.tv  
Rev Feb 1, 2012

Combination Nbr	Silicon Die Pads	Lead Frame or Substrate	Type	Plating on bonding fingers	Bonding with Au Wire	Bondability	Comments
1	Al	BT Strip	BGA	Ni/Au	Au	Yes	Au plating minimum 0.3um thickness to prevent Ni oxide forming on bond fingers
2	Cu	BT Strip	BGA	Ni/Au	Au	Caution	This Combination is problematic. Use caution to control process window. Possible oxidation on bond pads
3	Al	Cu Leadframe	QFN	NiPdAu	Au	Yes	4N Au wire is preferred. 2N Au wire is harder and requires more bonding force. 2N requires ultrasonics for 2nd bond which might cause possible bond finger vibration and NSOL (Lead frame can be tapped to reduce vibration)
4	Cu	Cu Leadframe	QFN	NiPdAu	Au	Caution	This Combination is problematic. Use caution to control process window. Possible oxidation on bond pads
5	Al	Cu Leadframe	QFN	Spot Silver	Au	Yes	Mature and stable process. No anticipated issues
6	Cu	Cu Leadframe	QFN	Spot Silver	Au	Caution	This Combination is problematic. Use caution to control process window. Possible oxidation on bond pads

NSOL = Non stick on lead  
4N = 99.9999 pure gold wire  
2N = 99.99 pure gold wire