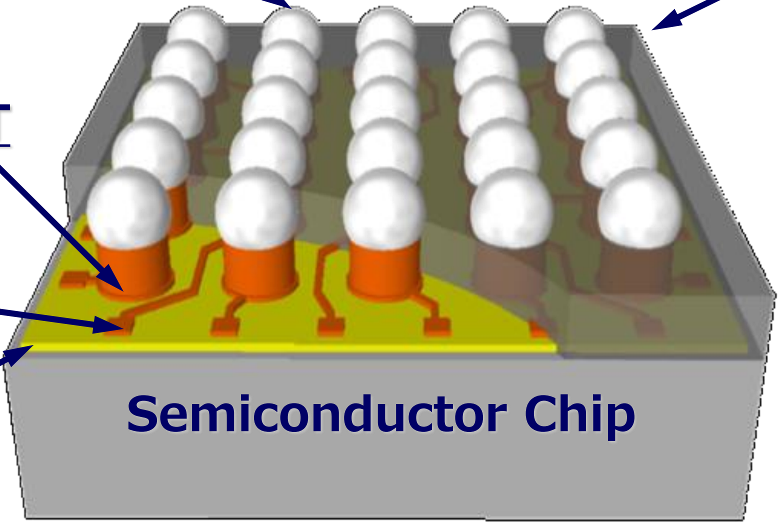
Cu POST WLP Construction and Characteristic



Solder ball terminal

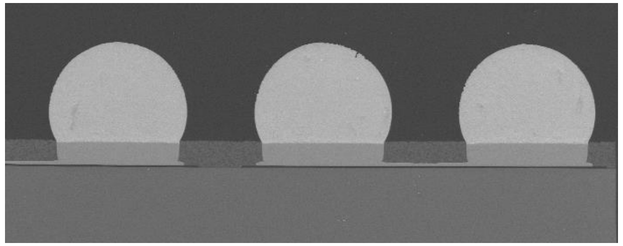
Resin encapsulation
(Liquid Epoxy Resin)

Cu POST

Cu RDL

Passivation
Layer

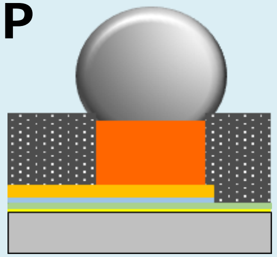
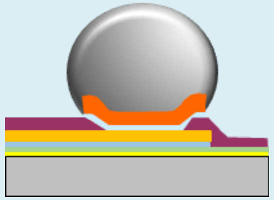
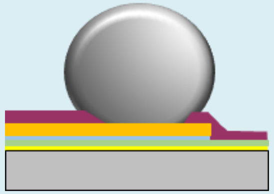
Semiconductor Chip



Characteristic (Summary)

▶ ① **High reliability.**
▶ ② **High current capacity** *Under Development*
▶ ③ **Reduce chipping on Circuit side (Protected by resin)**
▶ ④ **Improve quality for low-k**
▶ ⑤ **Low temperature process**
(Damage reduction for insulation film)

Cu POST WLP ①High reliability

Reliability test results	JEDEC Standard	CP 	U 	V 
	Criteria			
Reflow MSL Level1 (85℃85% 168Hr ;Reflow T_p260℃x 3times)	Reflow3times	MSL Level1 (Reflow×10) Pass	MSL Level1 (Reflow×10) Pass	MSL Level1 (Reflow×10) Pass
HTS 150℃	1,000H	**2,000H Pass**	1,000H Pass	1,000H Pass
PCT 121℃,100%	A:24H D:168H F:336H	**500H Pass**	168H Pass	168H Pass
T/C -65～150℃		1,000cyc Pass	1,000cyc Pass	1,000cyc Pass
HAST 130℃85% 3.5V	96H	**120H Pass**	96H Pass	96H Pass
THB 85℃85% 3.5V	TYP 1,000H	**2,000H Pass**	1,000H Pass	1,000H Pass

＊ Oume evaluation result