



*Global
Electronics
Manufacturing*

Quotation #: GTW1609121R01

Quotation

To: TAIWAN SEMICONDUCTOR CO., LTD.
Mr. Chris Lin

Date: 2016/9/12

Prepared by: Sunny Chen

Description: Assembly and Test Service

This quote is being provided for TSC. It is being provided on limited information and is based on GEM'S standard flow assuming no special handling.

Quote is being provided for budgetary purposes only

1) Volume & End User's price (USD per K units)

Package	Leadframe type (Etch/Stamp/S G/DG)	D/A Material (Epoxy, SS)	Molding Compound	Wire type	Wire Size	Total Wires	Source Wires	Die Count	Test Time	Expect ed Volume (per month)	Baseline Price	Wire Adder	Double stitch Adder/ wire	Die add
GEMPAK5060 Cu+ribbon (single stitch)	Stamping	SS/SP	Green E500HM	Cu Rib	Cu 1.5/2mil Rib 20/30/40/60mil*4	2	1	1	<250ms	<2000K	27		1	
GEMPAK5060 Cu+ribbon (single stitch)	Stamping	SS/SP	Green E500HM	Cu Rib	Cu 1.5/2mil Rib 20/30/40mil*4	3	≤2	1	<250ms		30		1	
GEMPAK5060 Cu	Stamping	SS	Green E500HM	Cu	Cu 1.5/2mil	≤15	≤14	1	<250ms	<2000K	26	0.5		



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GEMPAK5060 Cu+Al (single stitch)	Stamping	SS	Green E500HM	Cu Al	Cu 1.5/2mil Al 8mil	3	≤2	1	<250ms	<2000K	26	1.5		
GEMPAK5060 Cu+Al (Double stitch)	Stamping	SS	Green E500HM	Cu Al	Cu 1.5/2mil Al 8mil	3	≤2	1	<250ms	<2000K	26.50	2		
GEMPAK5060 Cu+Al Dual die	Stamping	SP	Green E500HM	Cu Al	Cu 1.5/2mil Al 8mil	4	≤2	2	<250ms	<2000K	35.50	2.5		
GEMPAK3333 Cu	Stamping	Epoxy: ABP8062 T	Green G600	Cu	Cu 1.5/2mil	≤17	≤16	1	<250ms	<2000K	21	0.5		
GEMPAK3333 Cu Dual die	Stamping	Epoxy: ABP8062 T	Green G600	Cu	Cu 1.5/2mil	≤10	≤8	2	<250ms	<2000K	21	0.5		
GEMPAK3333 Ribbon	Stamping	SS	Green G600	Cu Rib	Cu 1.5/2mil 20/30/40mil*4	2	1	1	<250ms	<2000K	23		1	
GEMPAK3333 Ribbon	Stamping	SS	Green G600	Cu Rib	Cu 1.5/2mil 20/30mil*4	3	2	1	<250ms	<2000K	26		1	



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SOIC-8	Stamping	Epoxy	Green G600	Cu	2mil	≤16	≤15	1	<250ms	≤ 3000K	23.22	0.5		1.5
DPAK/IPAK Matrix	Stamping	SS	Green E500HM	Cu/Al	Cu 1.5mil /Al 5mil Al ≤ 15mil	2	1	1	<250ms	≤ 3000K	26.22	2		
DPAK/IPAK Matrix	Stamping	SS	Green G631	Cu/Al	Cu 1.5mil /Al 5mil Al ≤ 15mil	2	1	1	<250ms	≤ 3000K	26.72	2		
TO251AA	Stamping	SS	Green 9240	Al	Al 5mil Al ≤ 12mil	2	1	1	<250ms	<2000K	33	2		

	Services	# Samples	Price (US\$/K units)
	Qualification samples for initial package or process qualification *	<1,000	\$250.00
	Engineering samples for non-production released products	<8,000	\$250.00 (if unit price * QTY >\$250, need to use unit price)
	Hot lot for sales samples for products already released to production	<1,000	2x standard price

2) Pricing Notes:

- All reliability testing will be quoted separately based on customer's requirements.
- All prices reflect GEM standard BOM, Assembly Instructions and Test Instructions.
- BOM, where different than GEM's BOM, requires waiver acceptance by GEM and may require price adders if tooling adjustments or other factors materially alter GEM's cost.
- GEM will prepare and purchase raw materials in accordance to TSC's forecasted production rate. Should TSC's forecast drops significantly and there are excess dedicated raw materials in GEM's stock, GEM will notify TSC of this situation immediately. TSC has the right to use up the material at GEM by increasing production volume or have GEM ship the excess dedicated raw materials to TSC's designated location and TSC will bear shipment cost and material cost.
- In the event TSC requests GEM to change device specifications or relax test limits (due to low yield or any other reason) and retest a lot which



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has completed final test, GEM will levy a “re-test” charge by adding the re-test cost per unit to the contracted unit price in the invoice issued to TSC when the lot is shipped.

- 2) Trade term: Ex-factory
- 4) Customer shall deliver 100% probed wafers to GEM with following conditions:-
 - a) Wafer delivery terms: DDP (Delivery Duty Paid), GEM's Shanghai (or Hefei or Kaohsiung) factory;
 - b) Die unit price: No charge to GEM;
- 5) Yield:
 - a) GEM's standard assembly yield = 98.5% (for reference);
 - b) Customer shall pay for at least 95% of total output (finished goods + failed goods) if the yield of that output is below 95% because of wafer or customer issues.
- 6) Payment term: Month end 30 days
- 7) Quotation validity period: 30 days. If TSC does not acknowledge acceptance of this quotation within quotation validity period, GEM has the right to change any item within the quotation and resubmit to TSC
- 8) Quotation duration: One year after acceptance of quotation or after first order, whichever comes first. After one year, GEM will issue new quotation and price list to TSC
- 9) *The services quoted in this quotation is based on GEM's warranty policy.*
- 10) Other conditions:
 - a) Process flow is per GEM standard. Any changes should have both parties agreement.
 - b) Customer must provide assembly, marking, testing and packing instructions.
 - c) Minimum Purchase Order amount is \$250.00
 - d) Customer are welcomed to provide their quality specifications (electrical, visual and mechanical) and reliability specifications (test conditions) as reference for GEM. GEM shall review these specifications and negotiate with customer in case GEM cannot meet some of the conditions specified by customer. If customer does not provide any of their quality and reliability specification to GEM, then GEM's internal quality and reliability specifications will be used as the guiding documents during processing of customer's products.



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Approval:

Date:

Approval: :

Date:

GEM Services, Inc.

TSC Representative, TSC

Note: Please counter sign this quotation and return a signed copy to GEM sales representative as indication of your acceptance of all items in this quotation. If a signed copy of this quotation is not received by GEM sales representative within the quotation validity period, GEM reserve the right to make changes to any item within the quotation. Secondly, in the absence of a signed quotation from customer, if customer place an order (after the quotation validity period) with GEM on products described in this quotation using conditions set forth in this quotation and GEM accepts the order, both parties agree that this means both parties will accept all conditions set forth in this quotation in its entirety