



**Pwr Blade®**

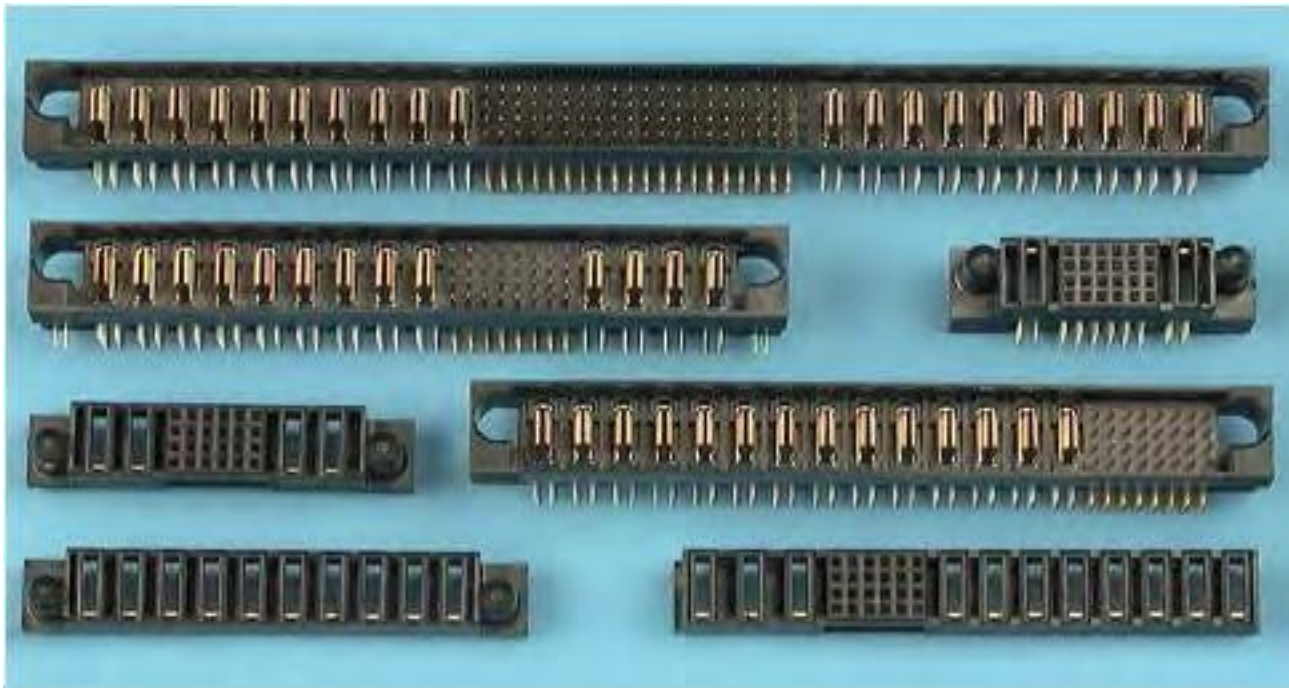
**Product Presentation**



# PwrBlade® Product Development and History



- FCI developed PwrBlade® and release into production Yr 2000.
- Licensed to Tyco AMP MTB XL as 2nd source in year 2000, Tyco 2nd source starting to proving its MTB XL from the year 2003, since the time from then onwards, FCI PB and Tyco AMP MTB XL are intermatable and interchangeable.
- FCI PwrBlade® has been in power connector market for more than 13 years now., taking a market leader role.



# PwrBlade Plus: SOP series and Terminal



PB	Terminal tail		Configuration					Cable extension
	STB	PF	P+S+P	S+P	P+S	P only	S only	
RA Hdr	YES	YES	YES	YES	YES	YES	YES	Yes
RA Rec	YES	YES	YES	YES	YES	YES	YES	Yes
Vtl Rec	YES	YES	YES	YES	YES	YES	YES	Yes
Vtl Hdr	YES	YES	YES	YES	YES	YES	YES	Yes

P=Pwr terminal S=Signal Terminal, cable extension means the terminal has the cable version to wire

# PwrBlade® Prod Training: Key Parameters

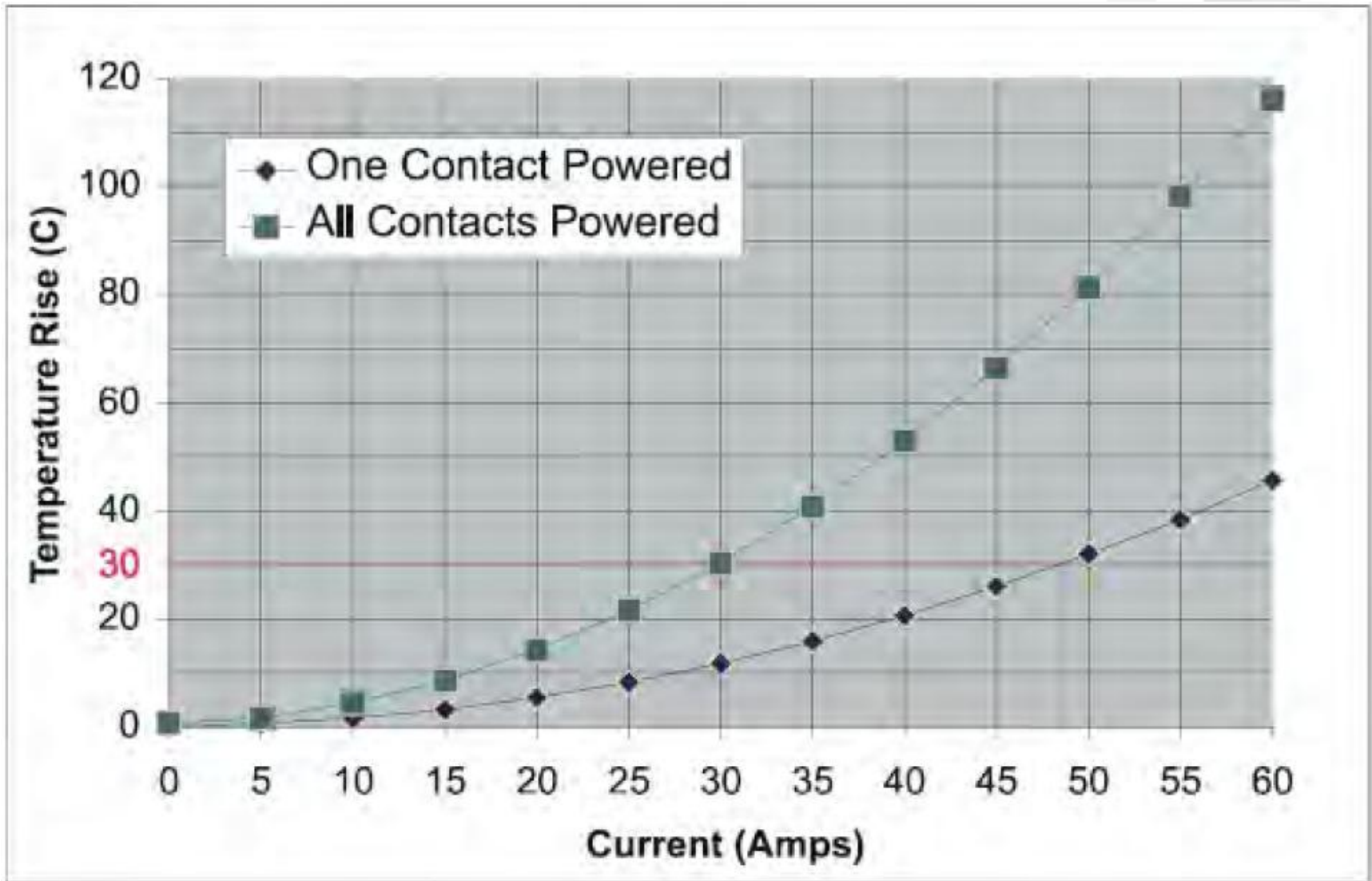


## Key Parameters

- Power Pin: when all power contact powered 30A/pin and only one power contact powered 48A/pin, at still air, with a TR not exceeding 30°C. (see next slide for curve)
- Fully modular design of HSG mold tooling provide a flexible configuration
  - Pwr Pin Pitch: 5.08mm, 6.35mm, 7.62mm, and other customized pitch based on HSG Tool spacer
  - Sig Pin: 2.54mm
  - Length: HSG part (left to right 200mm max.)
- Operating temp: - 55°C –125°C
- RoHS Fully Compliance: Yes for LF Version PN (non-LF PN is RoHS5 compliance)
- Height above PCB: see below table
- Stack Height: see next 2 slide
- Package: tray
- Terminal finish: STB, PF
- PCB assembly process: Wave Soldering for standard PN, PIP available based on case by case review
- Cable Assembly and Bus Bar product extension solution available
  - FCI NT Plant PM Team Kevin Liu and Johnson Long

PB connector Height above PCB		
Series of PB	mm	Inch
RAHdr	12.57	0.49
RARec	11.63	0.46
VtlHdr	12.70	0.50
VtlRec	12.70	0.50

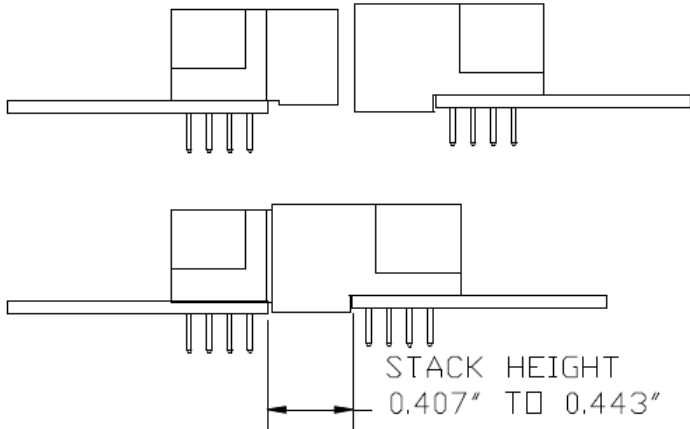
# PwrBlade® Prod Training: Current and TRr



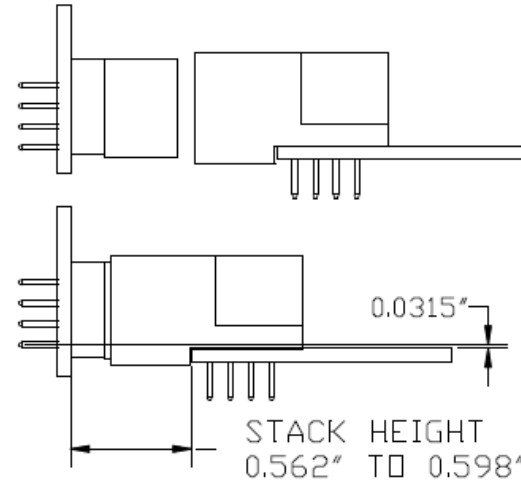
# PwrBlade® Prod Training: PB Stack height



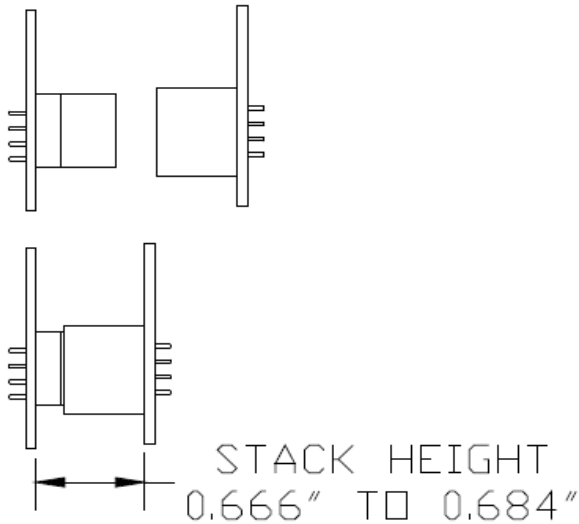
RA Rec. to RA Hdr: 10.337 to 11.252mm



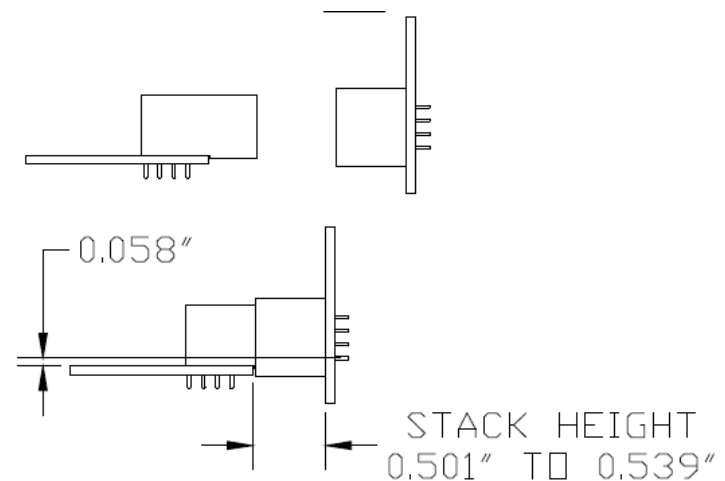
Vtl Rec. to RA Hdr: 14.274 to 15.189mm



VTI Rec. to VTI Hdr: 16.916 to 17.373mm



RA Rec. to VTI Hdr: 12.725 to 13.69mm



# PwrBlade® Prod Training: Terminal Sequence



PwrBlade has 3 levels of sequential mating to support hot plugging. They are:

- Level 1 : Pre Mate Power
- Level 2 : Standard Mate Power and Signal
- Level 3 : Post Mate Signal

Fig. 6  
Level 1 Premate Power

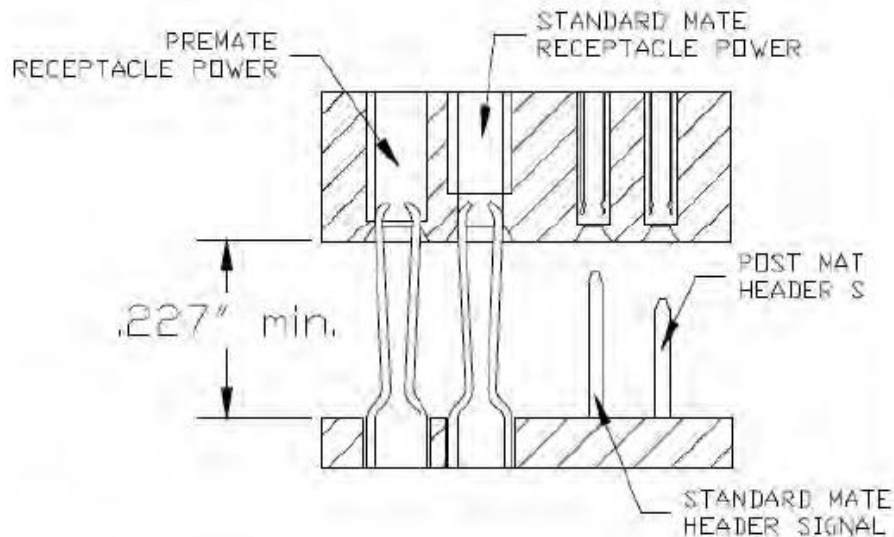
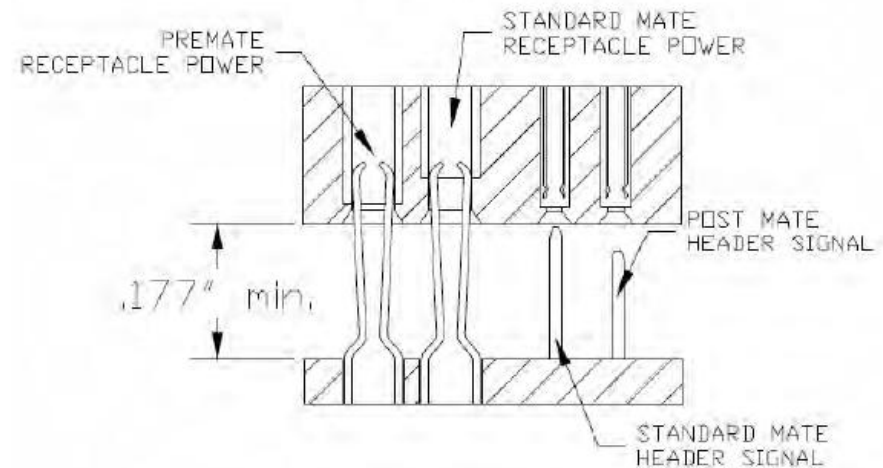


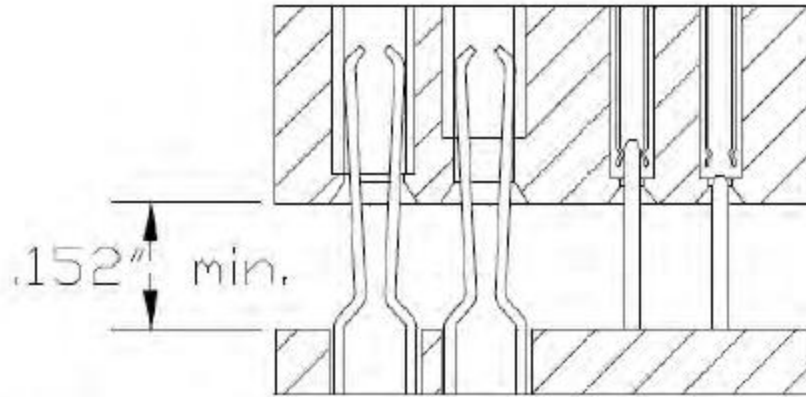
Fig. 7  
Level 2 Standard Mate Power



# PwrBlade® Prod Training: Terminal Sequence

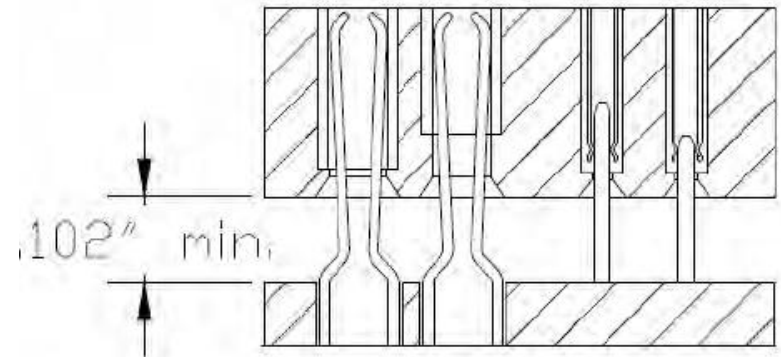


Fig. 8  
Level 2 Standard Mate Signal\*



·Note: Figure 7 and 8 show the separation between post mate power and standard mate signal is not great enough lobe considered two separate levels of sequencing

Fig. 9  
Level 3 Post Mate Signal





# PwrBlade® Working Voltage



Volts RMS ( *SELV Circuits )				
Contact Pitch	Within Primary Circuits	Primary to Secondary Circuits	Primary to Ground Circuits	Within Secondary Circuits
.200" (5.08 mm)	60*	60*	60*	60*
.250" (6.35 mm)	200	NR	200	200
.300" (7.62 mm)	300	150	300	300

# PwrBlade® Prod Positioning



- 2-piece solution Power connectors
- High current performance up to 48A for single pwr pin and 30A multy pins, at 30degreeC TR at still air.
- Fully modular design with various of configurations
- Co-plan, backplan and board to board solutions available
- Cable product extension solution available
- Busbar product extension solution available

# PwrBlade® Prod features and benefit



Product features	Benefits
2-piece solution	Meet all co-planer, backplane, Borad to board application
Fully modular deisgn HSG	Providing a max. 200mm length(left to right) with various configurations
Pwr Pin up to 48A single pin and 30A multy pins, 30degreeC at still air	Meet all low and mid-current performance level requirement
Pwr terminal and Signal terminals configurations	Providing flexible configurations to customer applications
Blind mate guide	For good mating in customers site
Lead free terminal finish availabnle	Fully RoHS compliance
PF and Soldering finish	providing to meet wave soldering and press fit process assembly
Hot plug	Meet current interrupt application

# PwrBLade® Applied PCB



	mm	in
Drilled hole diameter	1.151 $\pm$ 0.025	0.0453 $\pm$ 0.001
Plated hole diameter	1.016 $\pm$ 0.08	0.040 $\pm$ 0.003
Copper plating	0.051 $\pm$ 1.23	0.002 $\pm$ 0.001
Tin/Lead plating	0.007	0.0003
Land/Pad size	1.727 $\pm$ 0.064	0.068 $\pm$ 0.0025

- For press fit termination the PCB must be at least 0.062" thick.
- For solder tail termination the values for the PCB are as follows:

Table 3

Tail Lengths(in)	Maximum PCB Thickness(in)
0.090 $\pm$ 0.005 / -0.010	0.062 $\pm$ 0.010
0.135 $\pm$ 0.020	0.095 $\pm$ 0.010
0.165 $\pm$ 0.020	0.125 $\pm$ 0.010

# PwrBlade® Test and Certificate



## Test and Certificate:

- FCI Internal test: test report available upon request
- uL: report available upon request
- SGS: report available upon request

# PwrBlade® Product Key Documents



## Product Documents

- Prod Spec. GS-12-149
- Prod. Application: BUS-20-067

# Competitive Landscape



## Who is our competitors?

- FCI share license to tyco AMP, TE is our 2nd source and competitor, too.
- Molex
- Local makers

## Why / How are we better then Competitors?

- customers basis of PB for more than 12 years
- better cost/price
- shorter Lead time
- more flexible service
- Local makers better in price, but in shortage of product reliability.

# PwrBlade® Product Application 1/3



Servers





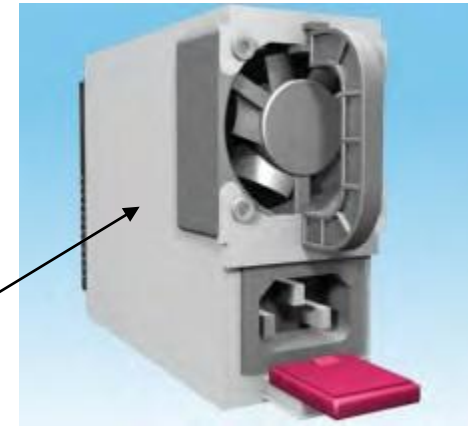
# PwrBlade® Product Application 2/3



Storage



Front view



Back view



# PwrBlade® Product Application 3/3



Switches,



Routers,



Base station



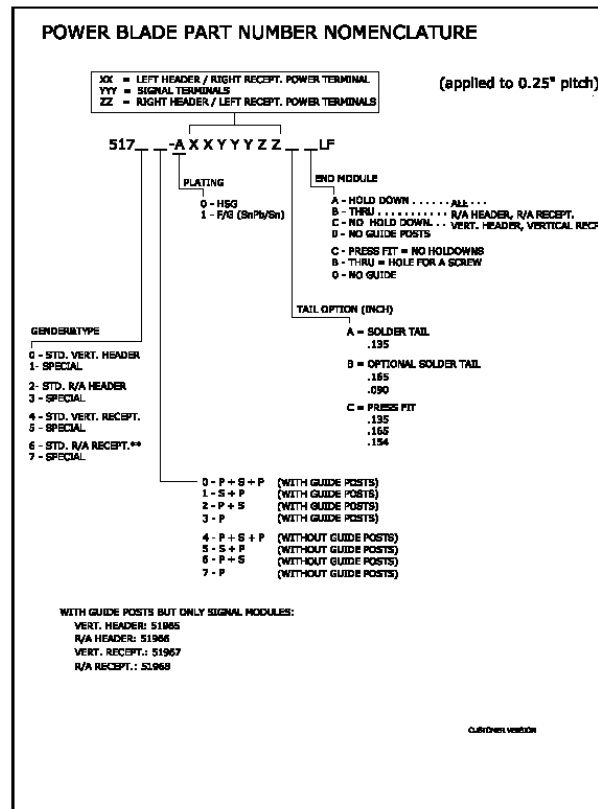
# PwrBlade® Customer



# PwrBlade® PN



- Power Blade Standard PN Nomenclature: see attached file for self-explain, we provide an example here with base PN begins with 517XXX.



# PwrBlade® PN active up to Date



Up to May early, 2013


- We have more than 3500 PNs of various configurations.
- 1200 PNS out of 3500 are most frequently used active PNs in daily business.
- FCI is already been in the leader position for long years in Pwrblade business.

# PwrBlade® Pricing and Pricing strategy



FCI license to tyco as 2nd source for PB(tyco MTB XLE)

- Refer to GPS system for all PB pricing, all pricing information available for quote
- We are leader, but in general, our price is competitive in first tier suppliers of multinational connector manufacturers
- All price inquiry shall be guided to DG PM team
- PM: Daisy Liu

FCI	TE	Picture
Pwr Blade	Multi-Beam XL	

# PwrBlade® Service Plan



Power Blade	P/N and Drawing LT	Sample plant LT	Plant mass PO PELT	Quotation
PB RA	<b>3 work days</b>	<b>2-3 wks</b>	<b>4-5 wks</b>	<b>2 work days</b>
HDR PB				
RA Rec				
PB Vertical				
HDR PB				
Vertical Rec				

Key contact name	
Technical inquiry	AP - DON Pwrblde Team (choose from FCI ELX global email address book)
Prod Manager	Daisy Liu
Guardian engineer	Ruan MT
SCM planner	Yan Jenny for Rec and Carly Li for Hdr



**THANK YOU**

