

55 amp PCB Powerclaw®

Contacts

The innovative design of our Powerclaw® family of connectors for the power electronics market makes connecting and disconnecting a snap, enabling safe and convenient "hot swapping*" during equipment maintenance without the need to power down. Compact and robust, they're rated at 55 amps for single pole and 50 amps for multipole connections.

Our mini horizontal and vertical Powerclaw contacts offer the same high current capacity as our original Powerclaws while providing the design engineer more options when board real estate is at a minimum.

FEATURES

Quick disconnect

Avoids the need for unfastening ring type terminals

Snap-On interface

Ensures foolproof assembly and proper connection

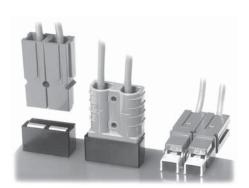
Vertical mini-powerclaw UL rated For current interruption (hot-plug) so that equipment can be hot swapped

Anti-static packaging

Meets electronics industry PCB requirements

Vacuum packaging

Prevents tarnishing of contacts during shelf life



PRODUCT SPECIFICATIONS

Product Information	PP Powerclaw	SB® Powerclaw Powerclaw	Locking Mini-Powerclaw	Vertical & Horizontal
Maximum Current* (per Tin Contact)	55 amps	50 amps	55 amps	55 amps
Maximum Voltage (AC or DC)	600 volts	600 volts	600 volts	600 volts
Housing Material	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate for vertical guide housings
Contact Material	Copper Alloy	Copper Alloy	Copper Alloy	Copper Alloy
Contact Plating: Tin	100 microinches Sn over 50 microinches Ni			
Contact Plating: Silver	100 microinches Ag over 50 microinches Ni			
Mating/Unmating Forces	7 lbf. Average (31 Newtons)	15 lbf. Average (66 Newtons)	7 lbf. Average (31 Newtons)	4 lbf. per contact (17 Newtons)
Suggested Board Thickness	.150" max.	.150" max.	.150" max.	.250" max.

^{*} See Temperature Rise Chart

High Power PCB Contacts	
Test Condition	Specification Tested to and Met:
Mechanical	
Sine Vibration	MIL-STD-1344, Method 2005, Test Condition I.
Mechanical Shock	MIL-STD-1344, Method 2004, Test Condition I.
Mating Force	APP Specification, 7 lbf. average mating force.
Durability	10,000 cycles, APP Specification
Electrical	
Temperature Rise at rated current	UL1977
Dielectric Voltage	MIL-STD-1344, Method 3001,
Withstand	Type 1.
Contact Resistance	MIL-STD-1344, Method 3004, Type 1

High Power PCB Contacts

Test Condition Specification Tested to and Met:

Environmental

MIL-STD-1344, Method 1003, Test Condition A. Temperature Cycling

MIL-STD-1344, Method 3001, Type 1. Humidity

Flammability

PP-, LP-, SB-series UL94 V-0



^{*} Contact factory for ratings



55 amp PCB Powerclaw® Contacts

ORDERING INFORMATION

Standard Powerclaw

Position Definition	PC	XXX	Χ	XX
	(Powerclaw)	(Color) BLK-Black RED-Red BLU-Blue WHT-White GRA-Gray GRN-Greer	S–Silver	(Housing) PP–Powerpole 75 LP–Locking Powerpole 75 SB–SB50

Example: Blue 75 locking Powerclaw with tin plating (PC-BLU-T-LP)

Note: For additional colors please contact customer service

Individual Contacts and Guide Housings*

Part No.	Description
PC5930S	Std PC horizontal mount contact – Silver (Ag)
PC5930T	Std PC horizontal mount contact – Tin (Sn)
PC5933T	Mini-PC vertical contact – Tin (Sn)
PC5933S	Mini-PC vertical contact – Silver (Ag)
PC5934T	Mini-PC horizontal contact – Tin (Sn)
PC5934S	Mini-PC horizontal contact – Silver (Ag)
PC-HSG-SB	Guide housing for SB50 (Black)
PC-HSG-PP	Guide housing for PP75 (Black)

^{*} For non-ESD bulk packaged product, add –BK to part number when ordering.

Packaging Quantity

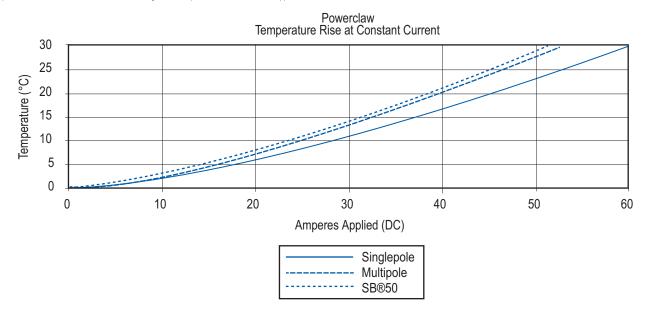
APP's Powerclaw® contacts and connectors are packaged in ESD plastic and foam. This prevents our contacts and connectors from carrying any electrostatic charge that could damage ICs and other sensitive components on a PC board during assembly. The vacuum-sealed package also prevents tarnishing or adverse environmental reactions to occur on the contact. Contacts and housings are also available in bulk quantities, packaged in non-ESD cartons.

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lk

TEMPERATURE RISE CHART

Temperature Rise at Constant Currents

Powerclaw® Tested in Accordance with EIA 364-70, No enclosure, 25+/-5 deg. C. ambient (#8 AWG Foil on Board Side, #6 AWG conductor on wire side, Contact Cat. No. 5900). Temperature Rise of Contact at exit from Housing Interface (No Air Flow over Test Loop).

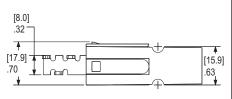


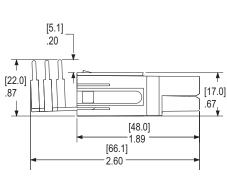


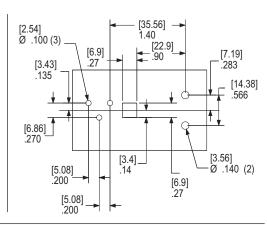
55 amp PCB Powerclaw® Contacts

STANDARD POWERCLAW DIMENSIONS

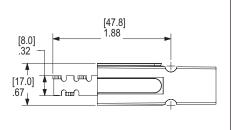
Standard Powerclaw with locking PP75

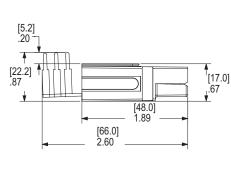


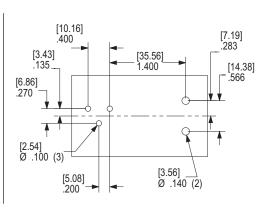




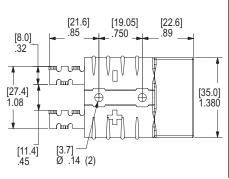
Standard Powerclaw with PP75

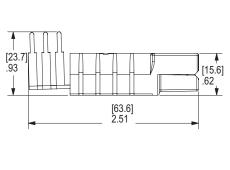


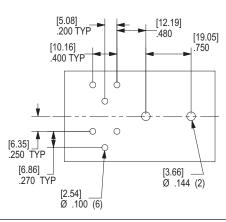




Standard Powerclaw with SB®50

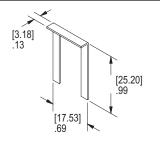






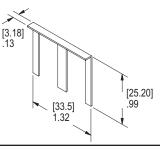
Staple for single powerpole

Part Number: PCSTAPLE-1



Staple for double powerpole

Part Number: PCSTAPLE-2

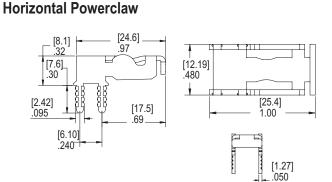




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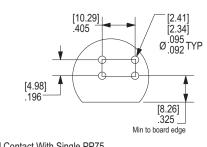
MINI-POWERCLAW DIMENSIONS

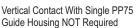
Vertical Powerclaw [6.25] .246 [24.3] .96 [9.7] [2.32] .38 .091 [1.27] .050 [10.29] [4.98]

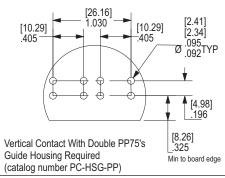


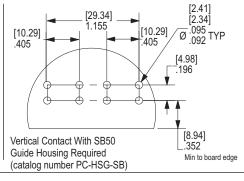
Vertical PCB Placement - Hole Configuration (with or without housing)

.405

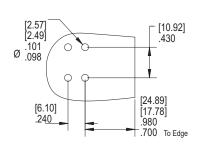




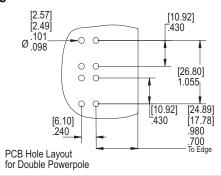


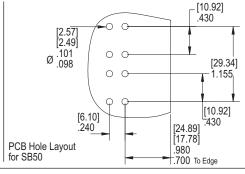


Horizontal PCB Placement - Hole Configuration

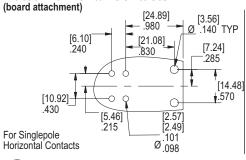


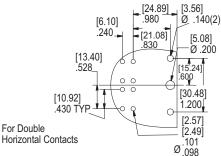
PCB Hole Layout for Singlepole Powerpole

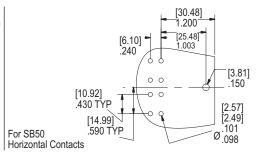




Mated Horizontal Contacts







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c \$1 US File No. E26226

All Data Subject To Change Without Notice

DS-PWRCL REV04