

TYPE A PIN	CIRCUIT	WIRE COLOR	TYPE B PIN
1	VBUS	RED	1
2	D-	WHITE	2
3	D+	GREEN	3
-	-	-	4
4	GND	BLACK	5
SHELL	CHASSIS GROUND	DRAIN WIRE /SHIELD	SHELL

Tolerances	
$< 2\text{m}$	$\pm 30\text{mm}$
$\geq 2\text{m} \leq 5\text{m}$	$\pm 50\text{mm}$
$> 5\text{m}$	$\pm 100\text{mm}$

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 **Electronics**  
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title	USB CABLE ASSEMBLY SERIES A TO MINI B
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product family		USB	code 213 sheet
size	dwg no		
	55003		

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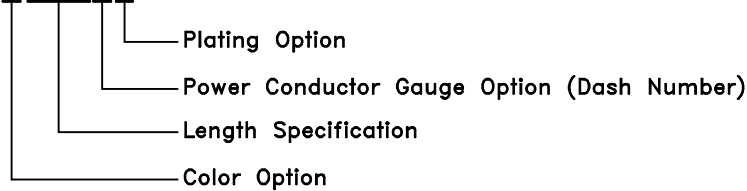
**PDM: Rev:A**

STATUS: **Released**

Printed: Sep 22, 2004

PRODUCT NUMBER  
55963-YVWXZN

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**Y Color: Jacket and Overmolding Option**

B Black  
W White

**VWX, Length specification (Note: See the power conductor gauge requirements for specific lengths Z Table).**

V Length in Meters

W Length in 1/10 Meters

X Length in 1/100 of Meters

Example a length of 1.85 Meters, VWX would be 185

**N Plating Option (Mating Area)**

C 30 Micro Inches GXT

D 30 Micro Inches Gold

**Z- Power Conductor Wire Gauge Table Option**

Dash No.	A	B	C	D	E
Conductor	28	26	24	22	20
Resistance	0.232 Ohm/m	0.145 Ohm/m	0.091 Ohm/m	0.057 Ohm/m	0.036 Ohm/m
Length					
0 Thru 0.81m	✓	✓	✓	✓	✓
0.82 Thru 1.31m		✓	✓	✓	✓
1.32 Thru 2.08m			✓	✓	✓
2.09 Thru 3.33m				✓	✓
3.34 Thru 5.00m					✓

Boxes marked with ✓ are in accordance with USB spec. gauge vs. length

**Plug & Cable Construction and Performance Specification**

**Cable Assembly Performance**

Cable Pull Out-40 Newtons (8.99 Pounds)

**Signal Attenuation**

Frequency (MHz)	Attenuation (maximum) dB/cable
0.064	0.08
0.256	0.11
0.512	0.13
0.772	0.15
1.000	0.20
4.000	0.39
8.000	0.57

**Signal Attenuation**

Frequency (MHz)	Attenuation (maximum) dB/cable
12.000	0.67
24.000	0.95
48.000	1.35
96.000	1.9
200.000	3.2
400.000	5.8

**Plug Performance**

Voltage Rating

Current Rating

Temperature Rating

Storage Temperature

Operating Temperature

Durability

Insulation Resistance

Dielectric Withstanding Voltage

Insertion Force

Withdrawal Force

**Electric Test:**

-100% Continuity

30 Vac (rms)

1 Amp

-40°C to 60°C

0°C to 40°C

1500 Cycles

1000 Mohms

500 Vac

35 Newtons (7.9 Pounds) Maximum

10 Newtons (2.3 Pounds) Minimum

35 Newtons (7.9 Pounds) Maximum

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ltr	ecn no	dr	date	linear	.X±.3			projection	title	USB CABLE ASSEMBLY			
A					.XX±.13					SERIES A TO MINI B			
					.XXX±.051								
				angles	0° ±2°			MM	product family	USB			
				dr	R. RINEHART	9/13/00	scale			size	dwg no	code	
				enrg	R.MACMULLIN	9/13/00							A4
				chr	R.MACMULLIN	9/13/00							
				appd	R.MACMULLIN	9/13/00	NTS				sheet		
sheet index	revision										2 of 3		
	sheet												

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PRODUCT NUMBER  
55963-YVWXZN

Cable/Plug Over mold

Bulk Cable Construction Materials

Signal Conductors, Copper, Twisted Pair  
Power Conductors, Copper

High Density Polyvinyl Chloride

28 AWG Stranded Tinned (7x0.127)  
28 AWG Stranded Tinned (7x0.127)  
26 AWG Stranded Tinned (7x0.163)  
24 AWG Stranded Tinned (7x0.203)  
22 AWG Stranded Tinned (7x0.254)  
20 AWG Stranded Tinned (10x0.254)

Wrap (Full Speed Only)

Aluminum/Mylar, 25" Minimum

Braid,Copper (Full Speed Only)

Aluminum exterior  
Interwoven Tinned 65" Minimum

Power Conductor Insulators

Coverage  
Semirigid-Polyvinyl Chloride, Red and Black

Outer Jacket

Polyvinyl Chloride

Signal Conductor Insulators

Foamed Polyethylene, Green and White

Plug and Cable Assembly Materials

Plastic Housing

High Temperature Thermoplastic  
Oxygen Index (LOI) > 21% UL 94V-0 RATING

Terminals

High Strength Copper Alloy  
(Phosphor Bronze)

Shields

High Strength Copper Alloy  
(Phosphor Bronze)

Plating Terminals

Underplate: 1.25 Micro Meters  
(50 Micro Inches) Nickel Minimum  
-C Mating Area: 30 GXT  
.05 Micro Meters (2 Micro Inches) of Gold  
Minimum Over 0.70 Micro Meters  
(30 Micro Inches) of Palladium Nickel  
Minimum]  
-D Mating Area: 30 Gold  
0.70 Micro Meters Gold (30 Micro Inches)  
Tail Area: 2.54 Micro Meters  
(100 Micro Inches) Tin Lead


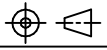

Plating Shell

Underplate: 1.25 Micro Meters  
(50 Micro Inches) Nickel Minimum  
Overall: 2.5 Micro Meters  
(100 Micro Inches) Bright Tin Minimum

NOTES:

1. Product Compliant With USB Specification.

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ltr	ecn no	dr	date	linear	.X±.3			projection 	title USB CABLE ASSEMBLY SERIES A TO MINI B			
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