

USB Type-C Waterproof Connector CAM-L41 / R41-B542A

MITSUMI

FEATURES

Model Name	CAM-L41
Part Number	R41-B542A
Description	USB Type-C Connector, Receptacle, Waterproof
Type	Midmount SMT
TID Number	1877
IP Index	IP68
Connectivity Standards	Thunderbolt 3™



External Dimensions	
Height	3.43 mm
Width	11.50 mm
Depth	8.40 mm

Packing	
Weight/Unit	0.50 g
Reel	1500 pcs/reel; 7500 pcs (5 reels)/carton

SPECIFICATIONS

Electrical Characteristics	
Low Level Contact Resistance	Initial: 40 mΩ max; After 50 mΩ max
Dielectric Strength	AC 100V, 1 min
Insulation Resistance	DC 500V 100 MΩ min
Contact Current Rating	Vbus 5A, Vconn 1.25A through GND and the other 0.25A. Δ t: 30 °C max
Power Delivery	100W

Transfer Characteristics (Informative)	
Differential Insertion Loss Fit at Nyquist Frequencies	Thunderbolt 3 Standard
Integrated Differential Multi-reflection	Thunderbolt 3 Standard
Integrated Differential Near-end Crosstalk on Super Speed	Thunderbolt 3 Standard
Integrated Differential Far-end Crosstalk on Super Speed	Thunderbolt 3 Standard
Differential Crosstalk on D+/D-	Thunderbolt 3 Standard
Integrated Return Loss	Thunderbolt 3 Standard
Differential to Common Mode Conversation	Thunderbolt 3 Standard

Mechanical Characteristics	
Insertion Force	5~20N
Extraction Force	Initial: 8~20N After durability: 6~20 N
Durability	10,000 cycles
Vibration	20~500 Hz / 30 m/s ² (3.1 G) / X, Y, and Z direction each 15 min
4-axis Continuity	20 N, 10 sec, up down left and right, 15 mm from exit of connector

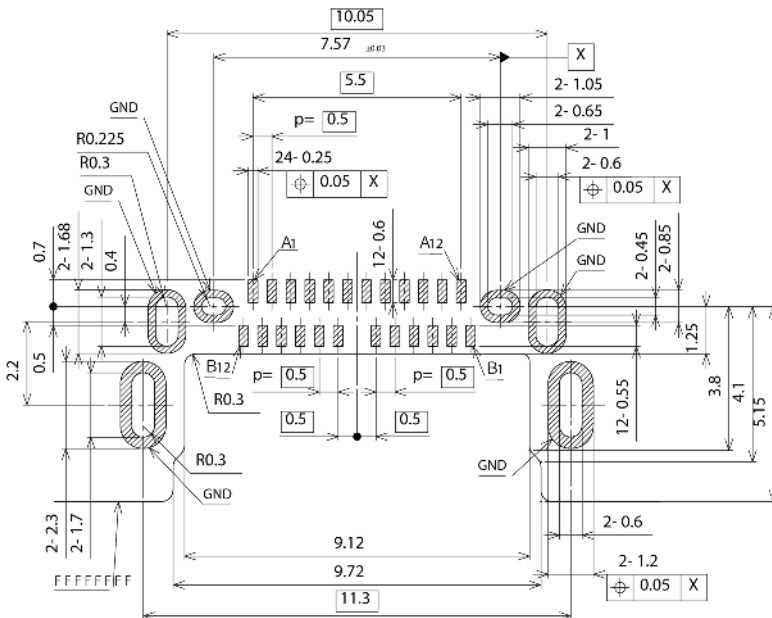
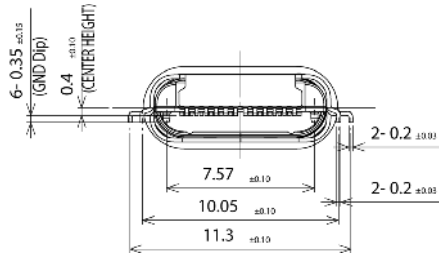
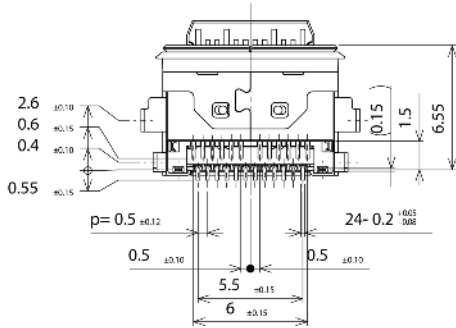
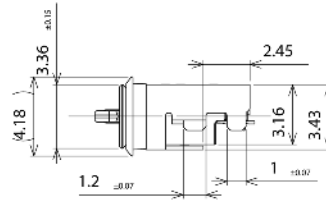
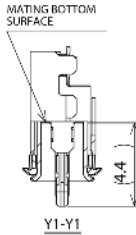
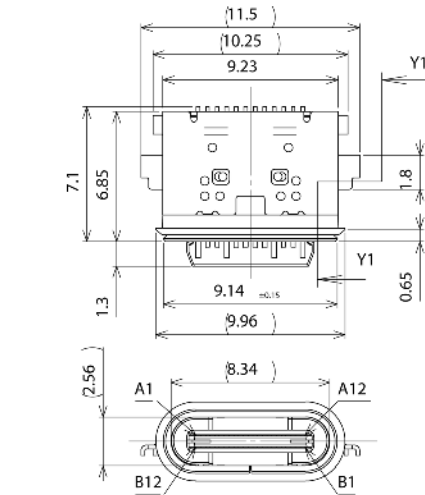
Environmental Conditions	
Temperature Life	105 ± 2 °C, 120H
Thermal Shock	-55 °C ~ 85 °C each 30 min 10 cycles
Temperature and Humidity Cycle	25 ± 3 °C 80±3% ~ 65±3 °C 50±30%RH each 30min 24cycles
Mixed Flowing Gas	30±2°C, 70±2%RH, H2S:10±5ppb, SO2:100±20ppb, NO2:200±50ppb, Cl2:10±3ppb ; Unmated 112H and Mated 56H
Maximum Soldering Temperature	250 °C, 10 sec, 2 times
RoHS Compliant/Lead Free	Compliant

MITSUMI USB Type-C Waterproof Connector CAM-L41 / R41-B542A

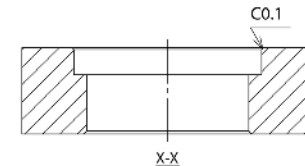
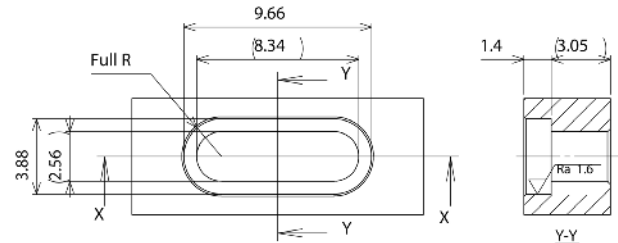
DIMENSIONS / FOOTPRINT / TERMINAL PINNING

Unit: mm
General Tolerance: ±0.3mm

Materials	
Contact Pin	Copper Alloy
Mid Plate	Stainless Steel
Insert Housing	PA Resin
Shell	Stainless Steel
Bracket	Stainless Steel
Gasket	Silicone
GND Plate	Stainless Steel
EMC Pad	Stainless Steel



Recommended FPC DIMENSION
General Tolerance: ±0.05



Recommended Case dimension
General Tolerance: ±0.05