

# 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	8.40 mm
Depth	11.50 mm

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

## SPECIFICATIONS

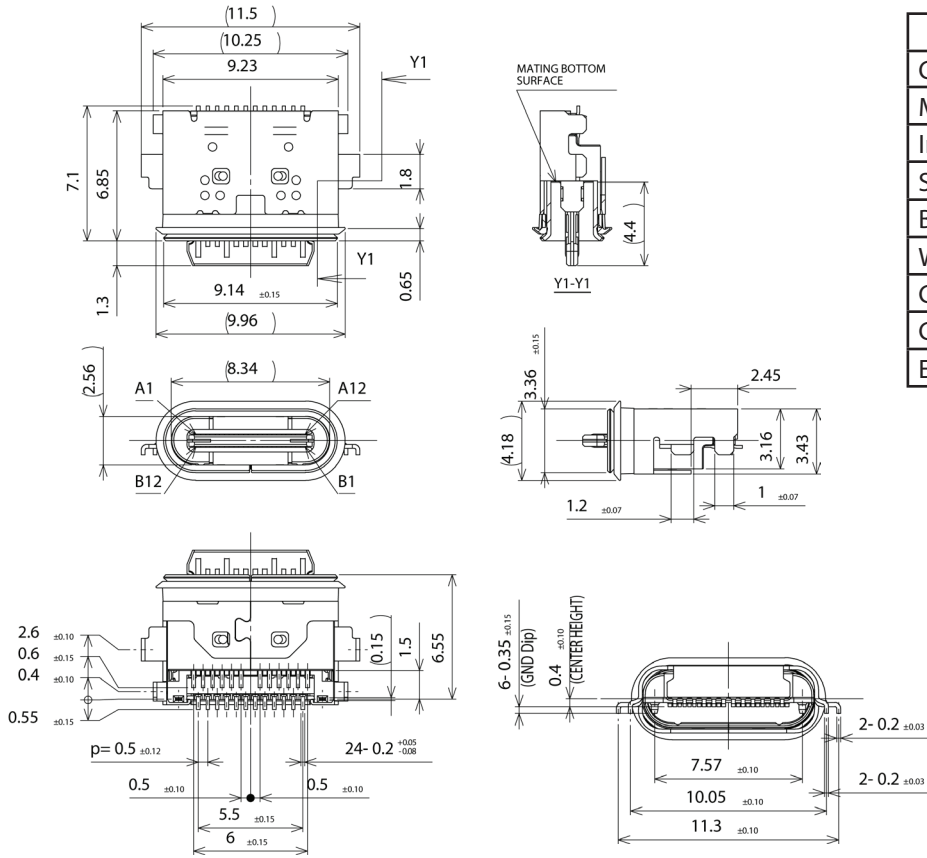
Electrical Characteristics	
Low Level Contact Resistance	Initial: 40 mΩ max; After 50 mΩ max
Dielectric Strength	AC 100V, 1 min
Insulation Resistance	DC 500V 100 MΩ min
Contact Current Rating	Δ t: 30 °C max

Transfer Characteristics	
Differential Impedance	85 ± 9Ω (Sspair); 90 ± 15Ω (D+/D-pair)
Differential Insertion Loss	≥ -0.6 dB @ 2.5 GHz; ≥ -0.8 dB @ 5 GHz; ≥ -1.0 dB @ 10 GHz
Integrated Differential Multi-reflection	≤ -40 dB
Integrated Differential Near-end Crosstalk on Super Speed	≤ -44 dB
Integrated Differential Far-end Crosstalk on Super Speed	≤ -44 dB
Differential Crosstalk on D+/D-	Limit 0.1 ~ 5 GHz, -40 dB / 7.5 GHz, -36 dB
Integrated Return Loss	≤ -18 dB
Differential to Common Mode Conversion	0.1 ~ 2.5 GHz, -30dB / 2.5 ~ 7.5 GHz, -25dB 7.5 ~ 100 GHz, -20dB

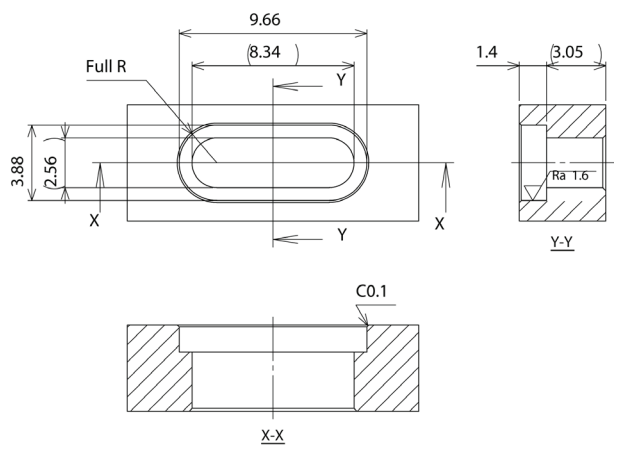
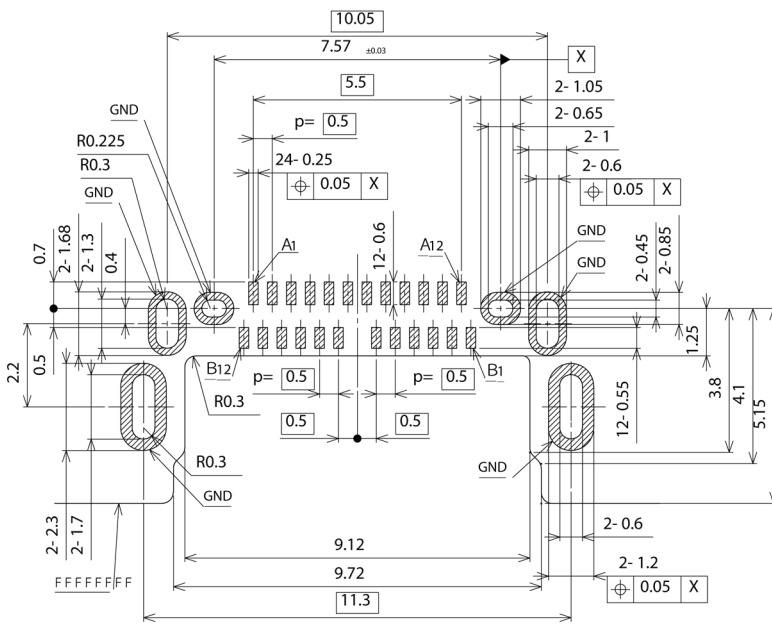
Mechanical Characteristics	
Insertion Force	5~20N
Extraction Force	Initial: 8~20N After durability: 6~20 N
Durability	10,000 cycles
Vibration	20~500 Hz / 3.10 G / X, Y, and Z direction each 15 min
4-axis Continuity	20 N, 10 sec, up down left and right, 15 mm from exit of connector

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±2ppb ; Unmated 112H and Mated 56H
Maximum Soldering Temperature	250 °C, 10 sec, 2 times
RoHS Compliant/Lead Free	Compliant

## DIMENSIONS / FOOTPRINT / TERMINAL PINNING



<b>Materials</b>	
Contact Pin	Copper Alloy
Mid Plate	Stainless Steel
Insert Housing	PA Resin
Shell	Stainless Steel
Bracket	Stainless Steel
Waterproof Structure	Elastomer
Gasket	Silicon
GND Plate	Stainless Steel
EMC Pad	Stainless Steel



Recommended FPC DIMENSION  
General Tolerance : ±0.05

Recommended Case dimension  
General Tolerance : ±0.05