

PRODUCT DATA SHEET DS34450

DESCRIPTION

Filtered DC feedthrough power inlet connector designed for use on standard telecoms voltages of 24VDC and -48Vdc, and featuring a high test voltage for safety and reliability. Suitable for all high performance applications requiring high reliability coupled with good high frequency performance such as servers, base stations, and switches.



FEATURES

- Suitable for all dc telecoms / server voltages up to 100V dc
- Proof test voltage of 1100Vdc
- Twin line with 49A current rating
- High capacitance per unit volume
- Self-healing metallised plastic film capacitor dielectric for fail-safe transient handling
- MPE solderless capacitor technology for high reliability
- Incorporates feedthrough capacitors with proper high frequency mounting and shielding for good performance to beyond 1GHz
- Incorporates non-reversible latching connector
- RoHS compliant

RATINGS AND CHARACTERISTICS

Rated voltage	100V dc
Test voltage	1100V dc 2 seconds
Rated Current, I_R @ 50°C*	49A
Capacitance Value	200nF±20%
Insulation resistance	>1000MΩ
Ambient temperature range	-40°C to +50°C
Category temperature range	-40°C to +85°C
Climatic category	40/85/21
MTBF	> 10million hours
Insulating materials flammability rating	UL94 V-0

*Current derating between 50°C and 85°C: For temperature, θ $I_\theta = I_R \sqrt{(85-\theta)/35}$
 (Current rating is based on connector rating and should be confirmed by testing in end application)

INSERTION LOSS

Typical Insertion Loss (dB) in 50 Ω system with/without load						
30 kHz	100 kHz	300 kHz	1 MHz	10 MHz	100 MHz	1 GHz
4	11	18	27	45	85	90

DIMENSIONS AND MECHANICAL DETAILS

Case dimensions:	38 x 28 x 21mm
Case material:	Tin plated steel
Potting:	Black epoxy resin meeting UL94-V0
Weight:	85g
Terminals:	M5 nickel plated brass each complete with nut, 2 washers, and stainless steel spring washer
Terminal tightening torque:	2N-m max
Mounting holes:	2 x 3.3mm mounting holes on 40mm ctrs.
Panel cut-out:	Rectangular fixing hole size 28.5 x 21.5mm
Mating connector details:	On request

INSTALLATION GUIDELINES

Feedthrough capacitors are designed for through-bulkhead mounting offering high frequency filtering in line to ground applications. They should be mounted through a metal bulkhead or chassis.

The mounting surface should be clean and unpainted to offer a low impedance path from the capacitor to the equipment chassis. Poor earth bonding will limit the available performance of the product and could compromise safety.

Conductive paint finishes should be avoided as they do not usually provide adequate conductivity.

2 spanners should ideally be used when making electrical connections to the terminals, and maximum tightening torque figures quoted should be observed.

SAFETY

All capacitors will store charge after power has been removed and must be treated with respect. Care should be taken to ensure capacitors are discharged prior to touching terminals. Where necessary, terminals should be enclosed by the user to prevent any danger of electric shock or accidental shorting.

FURTHER INFORMATION

For more detailed technical background information on feedthrough capacitors, and application notes detailing the benefits of feedthrough capacitors over traditional capacitors, please refer to the MPE catalogue ranges of feedthrough capacitors, visit our web site, www.mpe.co.uk, or contact the factory.