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TDK·Lambda

RSEN Series

Single phase 250Vac 3 to 300A EMC Filters with DIN rail option

https://product.tdk.com/en/search/emc/emc/power-line/tec_data/nf_rsen
https://www.emea.lambda.tdk.com/uk/products/r-series





The RSEN single-phase EMC filters are enclosed in a compact case and part numbers up to 30A can be either chassis or DIN rail mounted (up to 30A) with low leakage current options. They are rated for 250Vac with fifteen current ratings of 3 to 300A enabling the optimum attenuation to match the current rating. The series uses TDK's ferrite core material to provide noise attenuation. The connection terminals are integrated into the case with both the screws and terminal covers captive. This avoids dropped or lost hardware. The RSEN 3A to 30A models are UL certified for a short circuit current rating of up to 14kA and the 40, 50 and 60A models 35kA with the appropriate breaker.

Features	Benefits
• 3 to 300A Current Ratings	• Optimizes the Attenuation for the Current Rating
• DIN Rail Bracket Option	• Flexible Mounting
• Captive Hardware	• No Lost Screws or Terminal Covers
• Safety Certified	• Global Use

Model Selector

Model	Rated Current (A)	SCCR (kA)(1)	HV Pulse Protection	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		
						Common mode at 25dB	Common mode at 10dB	Differential mode at 25dB
RSEN-2003	3	14	N	1.0	250	0.1 to 20	-	0.2 to 30
RSEN-2006	6	14	N	1.0	110	0.1 to 10	-	0.2 to 30
RSEN-2010	10	14	N	1.0	40	0.2 to 20	-	0.2 to 30
RSEN-2016	16	14	N	1.0	20	0.3 to 20	-	0.3 to 30
RSEN-2020	20	14	N	1.0	10	0.4 to 20	-	0.3 to 30
RSEN-2030	30	14	N	1.0	6	2 to 30	-	0.4 to 30
RSEN-2040	40	35	N	1.0	6	2 to 10	-	0.2 to 30
RSEN-2050	50	35	N	1.0	4	2 to 10	-	0.2 to 30
RSEN-2060	60	35	N	1.0	3	2 to 10	-	0.2 to 30
RSEN-2080	80	-	N	1.0	3.4	2 to 10	-	0.1 to 30
RSEN-2100	100	-	N	1.0	2.7	2 to 10	-	0.1 to 30
RSEN-2150	150	-	N	1.0	2	2 to 10	-	0.1 to 30
RSEN-2200	200	-	N	1.0	1.4	-	0.4 to 30	0.1 to 30
RSEN-2250	250	-	N	1.0	1	-	1 to 20	0.1 to 30
RSEN-2300	300	-	N	1.0	0.7	-	2 to 20	0.1 to 30

Model Selector

Model	Rated Current (A)	SCCR (kA)(1)	HV Pulse Protection	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		
						Common mode at 25dB	Common mode at 10dB	Differential mode at 25dB
RSEN-2003L	3	14	N	0.01	250	0.1 to 3	-	0.2 to 30
RSEN-2006L	6	14	N	0.01	110	0.1 to 3	-	0.2 to 30
RSEN-2010L	10	14	N	0.01	40	-	0.1 to 10	0.2 to 30
RSEN-2016L	16	14	N	0.01	20	-	0.1 to 10	0.2 to 30
RSEN-2020L	20	14	N	0.01	10	-	0.2 to 10	0.3 to 30
RSEN-2030L	30	14	N	0.01	6	-	0.3 to 5	0.3 to 30

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RSEN	-	2	003	L	D
Series Name		Rated Voltage 2 = 250Vac	Rated Current 003 = 3A 300 = 300A	Low Leakage Current	DIN Rail Mount

Related Products

Type	Current Rating (A)	Series	Low Leakage	Faston on Terminals	Wire Leads	DIN Rail Mount	Fused	Discharge Resistor	Metal Case
Board mount line filter, HV Pulse	0.5 - 6	RSAG							
Board mount line filter	0.5 - 6	RSEG							
General purpose with faston terminals	6	RSEC							
General purpose	0.5 - 6	RSEL	Y	Y	Y				Y
HV pulse protection	0.5 - 6	RSAL	Y	Y	Y				
Power Entry Module with line filter	3, 6, 10	RPE	Y				Y	Y	
Power Entry Module with line filter, HV Pulse	3, 6, 10	RPA	Y					Y	
Compact size with screw terminals	6 - 30	RSEV				DIN-RSEV*			
Multipurpose	3 - 300	RSEN	Y (Up to 30A)			Y (Up to 30A)			
Multipurpose with HV pulse protection	3 - 60	RSAN	Y (Up to 30A)			Y (Up to 30A)			
High attenuation	3 - 300	RSHN	Y (Up to 30A)			Y (Up to 30A)			
High attenuation with pulse protection	3 - 300	RSMN	Y (Up to 30A)			Y (Up to 30A)			
Wide band, high attenuation	6 - 30	RSKN							

* Separate mounting bracket
Click here for TDK-Lambda three phase filters.

Specification

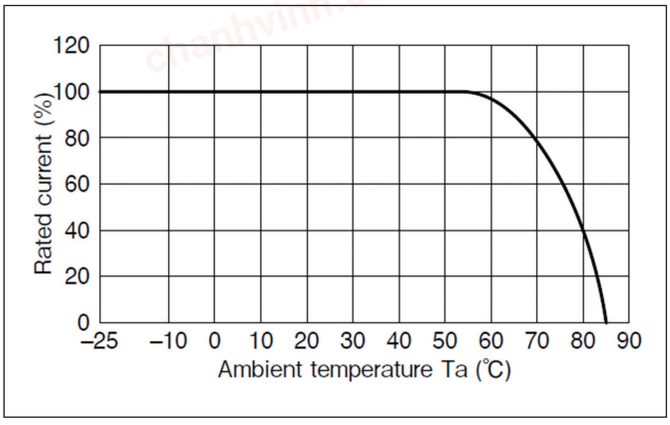
Model		
Input		
Rated Voltage	Vac/Vdc	250 (Safety certified for AC input only)
Input Frequency	Hz	47 - 63
Leakage Current	-	See model selector
Safety Certifications and Markings	-	UL1283, CSA C22.2 No.8 (cUL), EN60939-1, -2), conforms to RoHS Directive
Environmental		
Operating Temperature	°C	-25 to +85, derating above 50-55. See derating curves below
Storage Temperature	°C	-25 to +85
Humidity (non condensing)	%RH	Operating and storage 15 - 85
Cooling	-	Convection
Withstand Voltage	Vac	2,500 input to earth
Isolation Resistance (For 1 minute)	MΩ	>100 at 500Vdc
Vibration	-	10-55Hz Amplitude 1.5mm, Sweep for 1 min. X, Y and Z directions for 2 hours each
Other		
Weight (Typ)	g	RSEN2003: 170, RSEN2006-2030: 230, RSEN2040-2060: 870, RSEN2080: 360 RSEN2100: 380, RSEN2150: 580, RSEN2200: 840, RSEN2250: 810, RSEN2300: 780
Size (LxWxH)	mm	See outline drawings
Size (LxWxH)	Inches	-
Connectors		See outline drawings
MIL-HDBK-217F NOTICE2	Hours	RSEN2003: 6,914,673, RSEN2300: 5,235,054
Warranty	Years	5

Notes
(1) With inverse time circuit breaker. See UL 508 report on website
See website for detailed specifications, test methods and installation manual
RSEN technical files

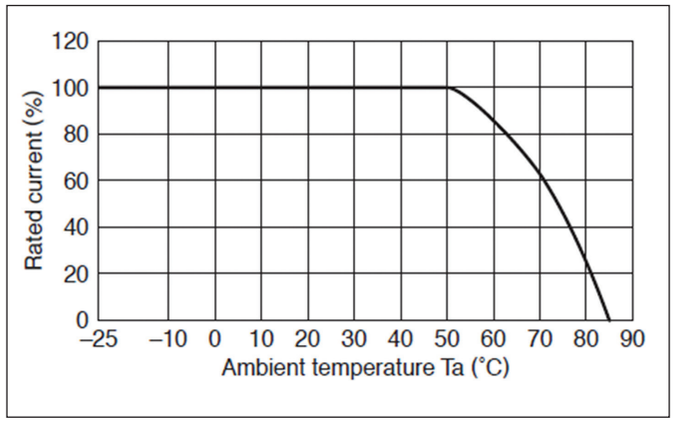
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Mechanical Specification

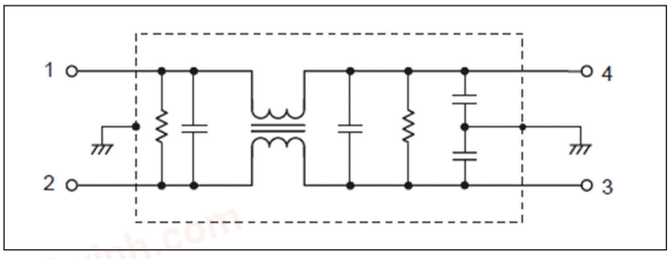
Derating Curve RSEN-2003 to 2060



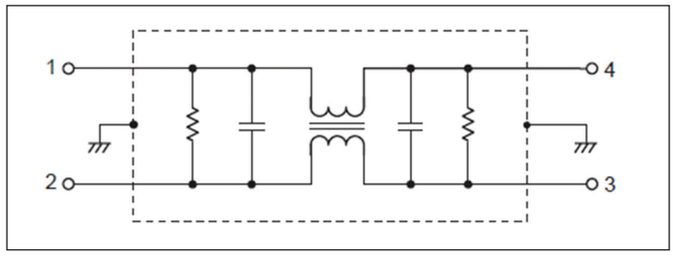
Derating Curve RSEN-2080 to 2300



Schematic standard leakage current

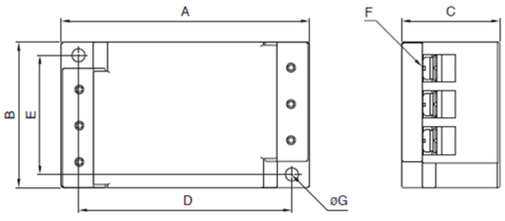


Schematic low leakage current (L option)

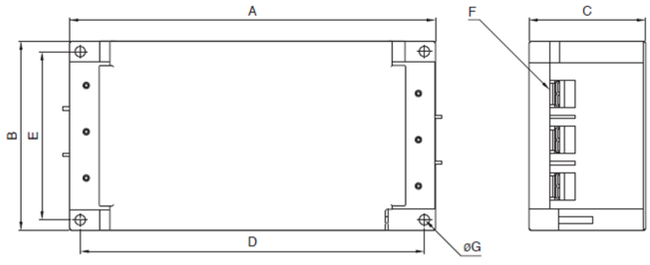


RSEN2003-2060 Outline Drawing

RSEN-2003/2006/2010/2016/2020/2030



RSEN-2040/2050/2060



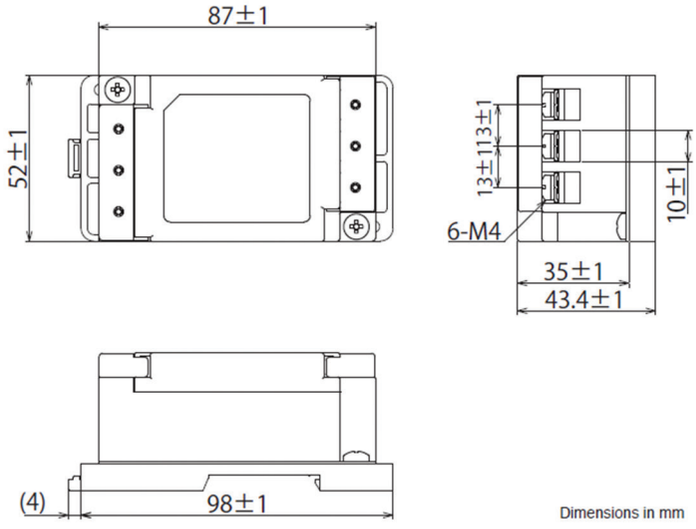
Dimensions in mm

Part No.	A	B	C	D	E	F	ϕG	Recommended clamping torque
RSEN-2003	87	52	35	75	43	M4	4.5	1.27N・m
RSEN-2006								
RSEN-2010								
RSEN-2016								
RSEN-2020								
RSEN-2030								
RSEN-2040	170	90	54	160	80	M5	4.5	2.5N・m
RSEN-2050								
RSEN-2060								

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DIN-RSEN Outline Drawing

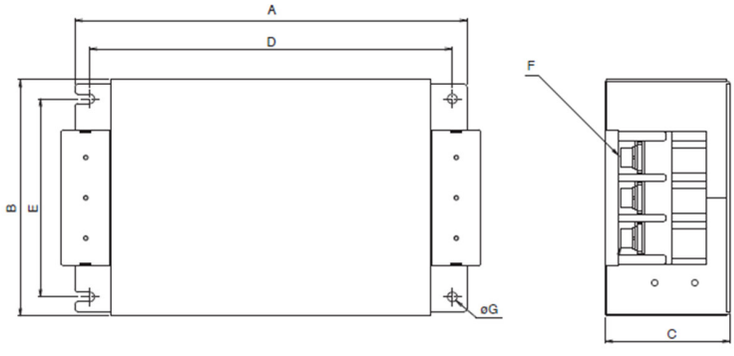
RSEN-2003D/2006D/2010D/2016D/2020D/2030D



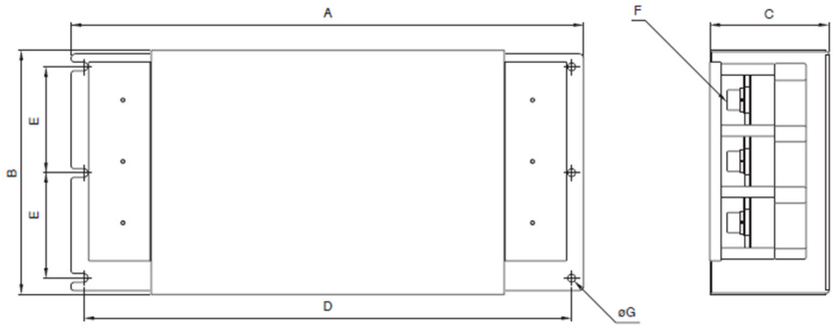
Dimensions in mm

RSEN2080-2300 Outline Drawing

RSEN-2080/2100/2150



RSEN-2200/2250/2300



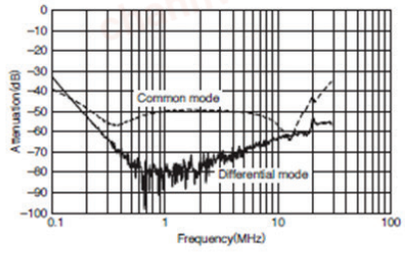
Dimensions in mm

Part No.	A	B	C	D	E	F	ϕG	Recommended clamping torque
RSEN-2080	267	161	85	247	135	M8	6.5	7.64N・m
RSEN-2100								
RSEN-2150	290	190	88	270	164	M8	6.5	
RSEN-2200	390	195	103	370	84.5	M10	6.5	11.8N・m
RSEN-2250								
RSEN-2300								

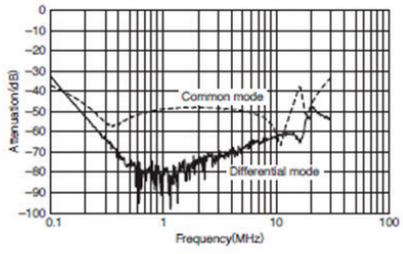
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RSEN Attenuation vs. Frequency

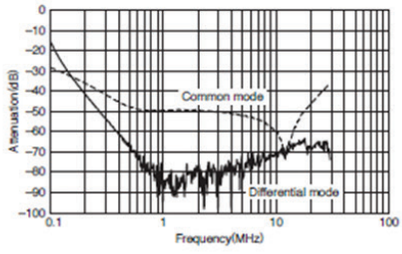
RSEN-2003



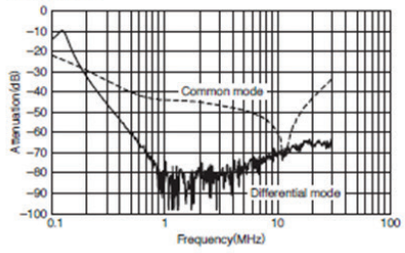
RSEN-2006



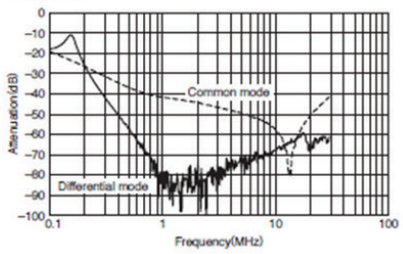
RSEN-2010



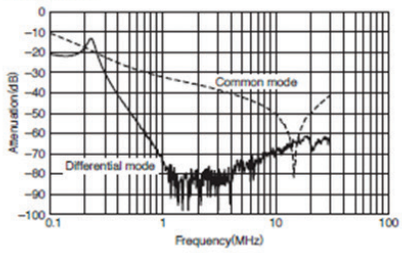
RSEN-2016



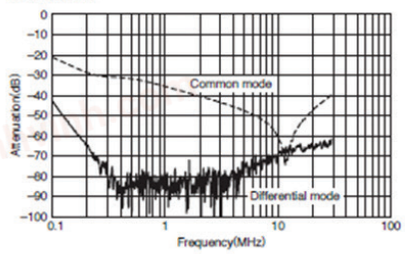
RSEN-2020



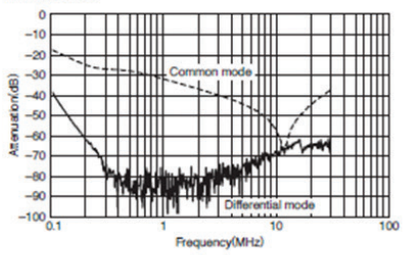
RSEN-2030



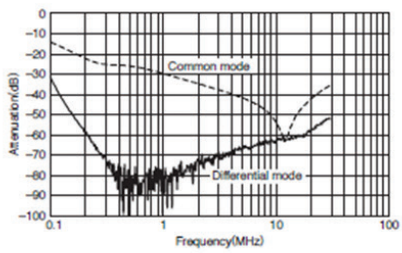
RSEN-2040



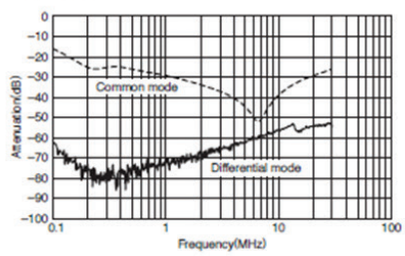
RSEN-2050



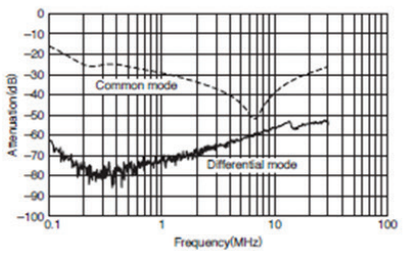
RSEN-2060



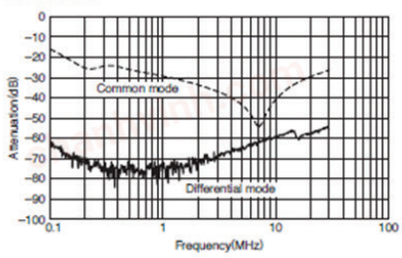
RSEN-2080



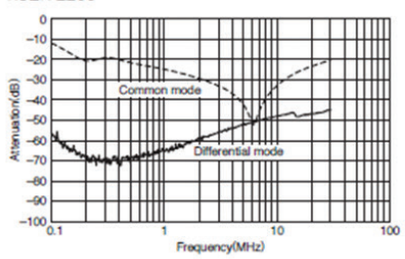
RSEN-2100



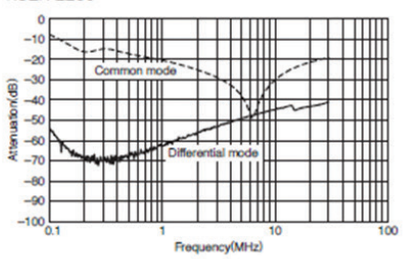
RSEN-2150



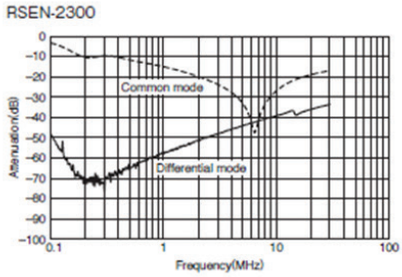
RSEN-2200



RSEN-2250



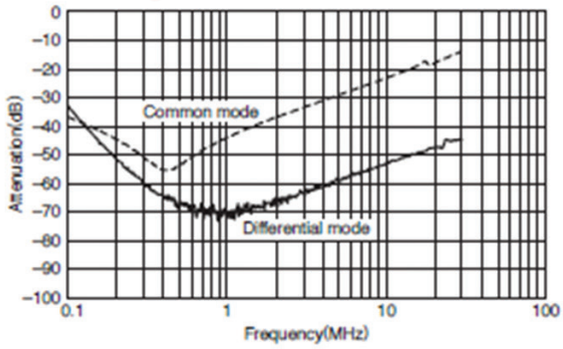
RSEN-2300



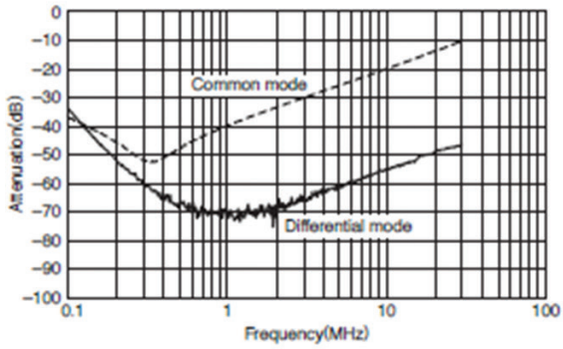
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RSEN2xxxL Attenuation vs. Frequency

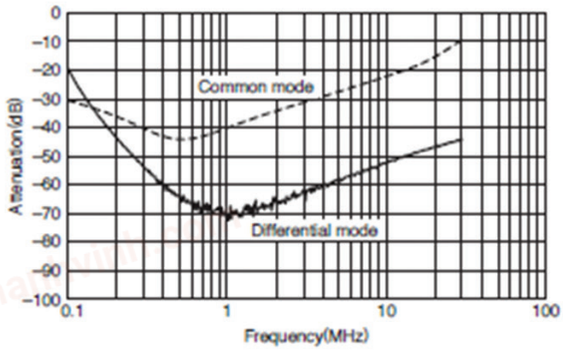
RSEN-2003L



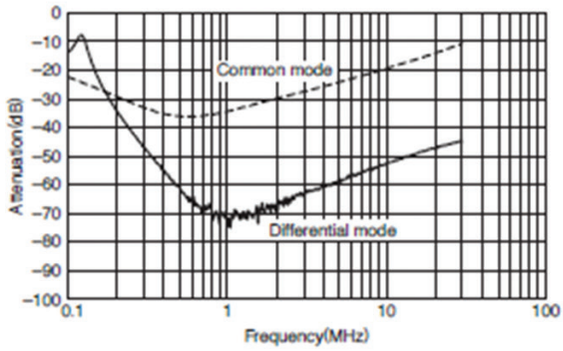
RSEN-2006L



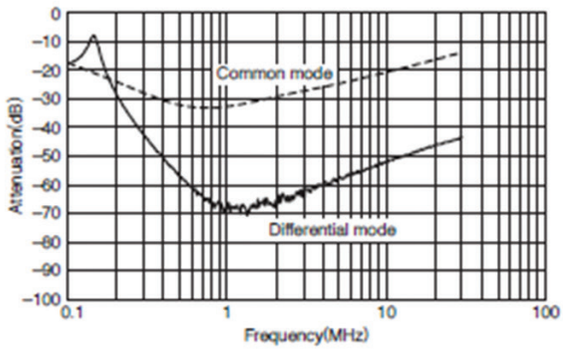
RSEN-2010L



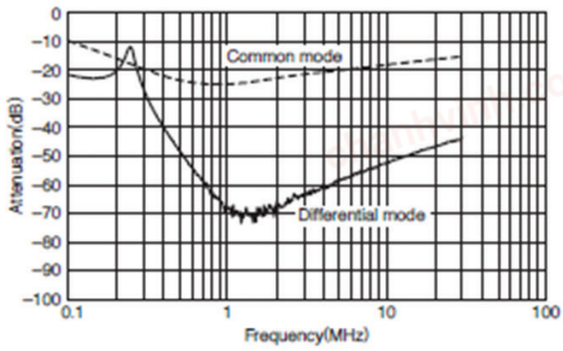
RSEN-2016L



RSEN-2020L



RSEN-2030L



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