

Power over coax (PoC) filter solution for automotive application

SMD-POC-037F

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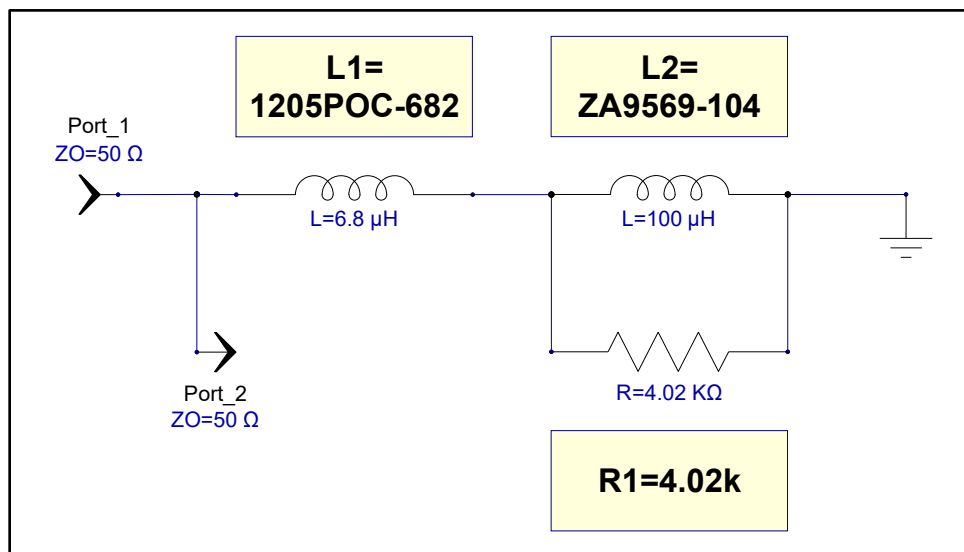
Overview:

Following application is designed to cover the frequency range from 1 MHz to 2 GHz for an impedance of 1k Ω , and 0.3A max current. The measurement of S-parameters are done on complete POC system in which two solution boards are connected through Leoni Decar-302 automotive cable with different lengths . In complete POC system, different currents up to max rating of the current are injected to get S-parameters under different loads at different temperatures.

Coilcraft Solution:

Inductors	DCR (Ohms) (max)	Max area (mm ²)	Current (A)		Notes
			Irms	Isat (30%)	
1205POC-682 (6.8uH)	0.410	4.48	0.880 (40C rise)	0.780	4.02k parallel
ZA9569-104 (100uH)	0.500	15.81	0.90 (40C rise)	0.430	
Total	0.910	20.29			

Schematic:



Coilcraft Complete POC System S-Parameters Measurements at Different Temperature with Max Load Current:-

