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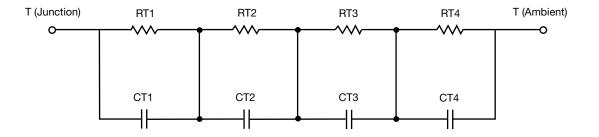
R-C Thermal Model Parameters

DESCRIPTION

The parametric values in the R-C thermal model have been derived using curve-fitting techniques. R-C values for the electrical circuit in the Foster/tank and Cauer/filter configurations are included. When implemented in P-SPICE, these values have matching characteristic curves to the single-pulse transient thermal impedance curves for the MOSFET.

These RC values can be used in the P-SPICE simulation to evaluate the thermal behavior of the MOSFET junction temperature under a defined power profile. These techniques are described in application note AN609, "Thermal Simulation of Power MOSFETs on the P-SPICE Platform".

R-C THERMAL MODEL FOR TANK CONFIGURATION



R-C VALUES FOR TANK CONFIGURATION THERMAL RESISTANCE (°C/W)					
RT1	11.9104	328.7294m	N/A		
RT2	3.1921	31.7490m	N/A		
RT3	931.0189m	508.6360m	N/A		
RT4	23.9695	131.4747m	N/A		
	THERMAL CAPAC	ITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot		
CT1	8.2562	2.2721m	N/A		
CT2	1.0641	9.5272m	N/A		
CT3	147.3202m	21.8478m	N/A		
CT4	4.0108	838.6015m	N/A		

Note

• n/a indicates not applicable

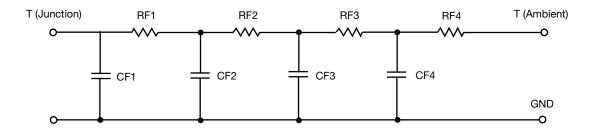
This document is intended as a SPICE modeling guideline and does not constitute a commercial product datasheet. Designers should refer to the appropriate datasheet of the same number for guaranteed specification limits.

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R-C THERMAL MODEL FOR FILTER CONFIGURATION



R-C VALUES FOR FILTER CONFIGURATION THERMAL RESISTANCE (°C/W)					
RF1	884.7234m	453.0370m	N/A		
RF2	6.5762	487.8777m	N/A		
RF3	23.1425	58.4801m	N/A		
RF4	9.4830	1.6043m	N/A		
	THERMAL CAPAC	ITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot		
CF1	24.3391m	1.7988m	N/A		
CF2	882.6174m	29.5526m	N/A		
CF3	1.7594	2.9697	N/A		
CF4	2.6137	35.8990	N/A		

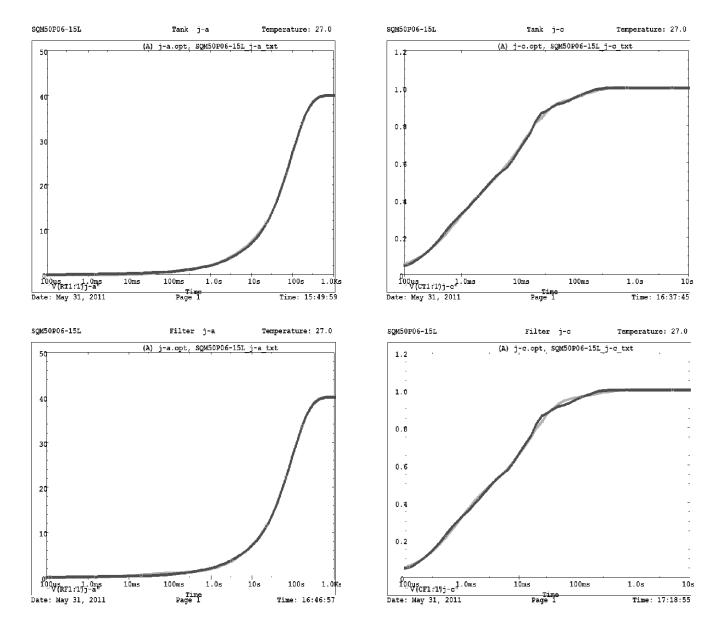
Note

• n/a indicates not applicable

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