

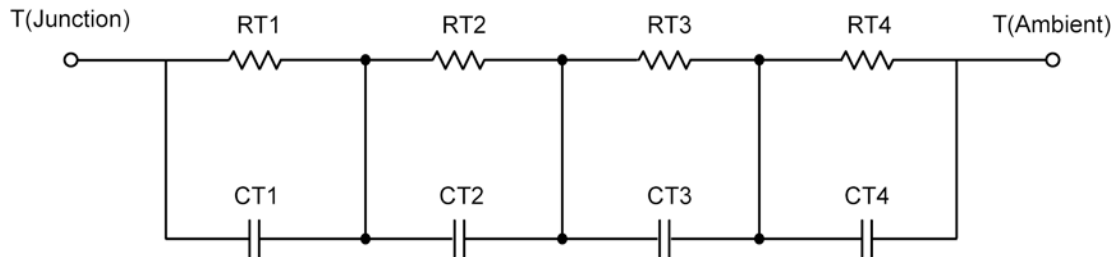
R-C Thermal Model Parameters

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.

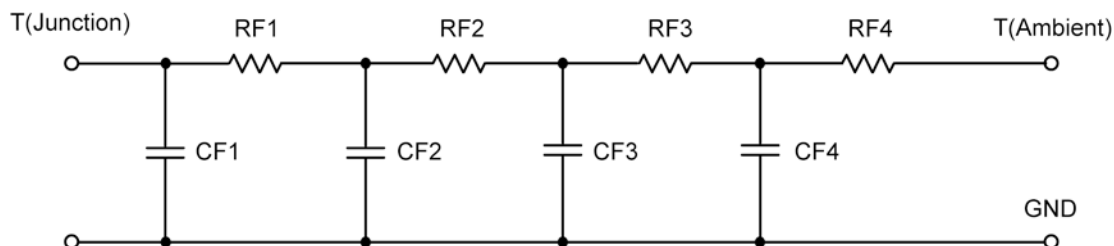
These RC values can be used in the P-SPICE simulation to evaluate the thermal behavior of the MOSFET junction temperature under a defined power profile. These techniques are described in Application Note AN609, "Thermal Simulation of Power MOSFETs on the P-Spice Platform."

R-C THERMAL MODEL FOR TANK CONFIGURATION



R-C VALUES FOR TANK CONFIGURATION			
Thermal Resistance (°C/W)			
Junction to	Ambient	Case	Foot
RT1	1.8421	4.4900 m	N/A
RT2	12.8017	763.6100 m	N/A
RT3	9.6767	1.5502	N/A
RT4	45.6795	1.1817	N/A
Thermal Capacitance (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	1.5639 m	5.8976 m	N/A
CT2	420.8210 m	817.8572 u	N/A
CT3	35.8721 m	13.5077 m	N/A
CT4	1.6040	11.1571 m	N/A

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

R-C THERMAL MODEL FOR FILTER CONFIGURATION**R-C VALUES FOR FILTER CONFIGURATION**

Thermal Resistance ($^{\circ}\text{C}/\text{W}$)			
Junction to	Ambient	Case	Foot
RF1	3.1831	12.9831 m	N/A
RF2	12.8594	880.7106 m	N/A
RF3	21.2722	1.6900	N/A
RF4	32.6853	916.3063 m	N/A
Thermal Capacitance (Joules/ $^{\circ}\text{C}$)			
Junction to	Ambient	Case	Foot
CF1	3.2541 m	85.5122 u	N/A
CF2	42.8876 m	513.3697 u	N/A
CF3	483.6856 m	5.6650 m	N/A
CF4	1.7209	367.8514 u	N/A

Note

NA indicates not applicable

