

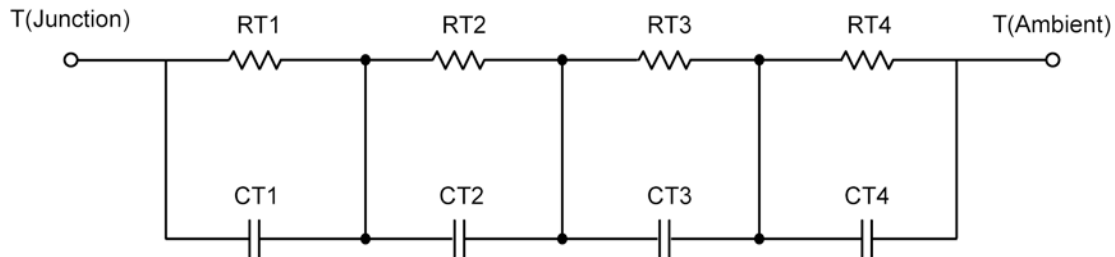
R-C Thermal Model Parameters

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.

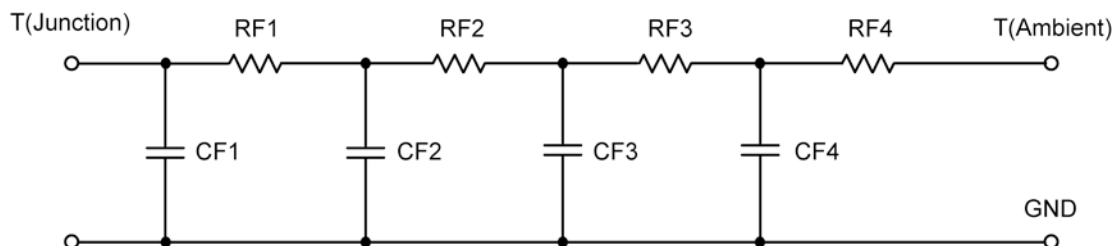
These RC values can be used in the P-SPICE simulation to evaluate the thermal behavior of the MOSFET junction temperature under a defined power profile. These techniques are described in Application Note AN609, "Thermal Simulation of Power MOSFETs on the P-Spice Platform."

R-C THERMAL MODEL FOR TANK CONFIGURATION



R-C VALUES FOR TANK CONFIGURATION			
Thermal Resistance (°C/W)			
Junction to	Ambient	Case	Foot
RT1	44.1392	520.1944 m	N/A
RT2	10.6947	1.4793	N/A
RT3	11.5949	85.0993 m	N/A
RT4	3.5712	515.4063 m	N/A
Thermal Capacitance (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	1.8399	875.5937 u	N/A
CT2	2.2986	10.9587 m	N/A
CT3	120.8597 m	287.0482 m	N/A
CT4	14.3351 m	9.2056 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	5.0575	872.7392 m	N/A
RF2	8.9427	1.1015	N/A
RF3	14.6554	620.2022 m	N/A
RF4	41.3444	5.5586 m	N/A
Thermal Capacitance (Joules/ $^{\circ}\text{C}$)			
Junction to	Ambient	Case	Foot
CF1	15.7525 m	923.4464 u	N/A
CF2	82.3123 m	6.4751 m	N/A
CF3	379.8746 m	3.4136 m	N/A
CF4	1.2559	186.2779 m	N/A

Note

NA indicates not applicable

