

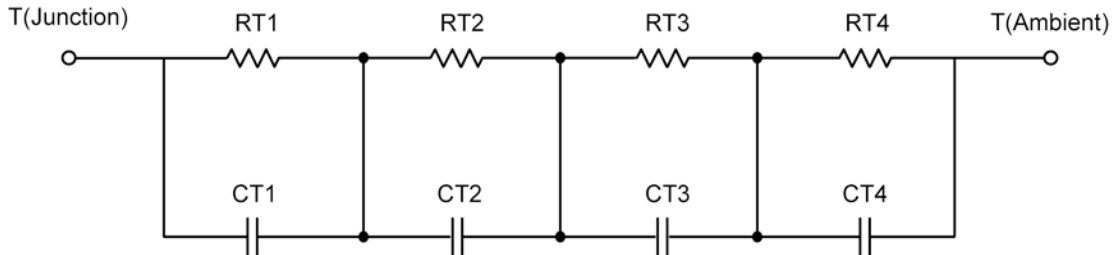
R-C Thermal Model Parameters

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."

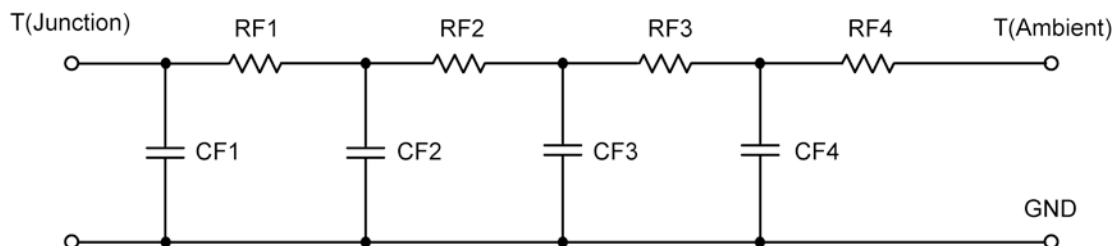
R-C THERMAL MODEL FOR TANK CONFIGURATION



R-C VALUES FOR TANK CONFIGURATION

Thermal Resistance ($^{\circ}\text{C}/\text{W}$)			
Junction to	Ambient	Case	Foot
RT1	3.9506	362.3000 u	N/A
RT2	7.5613	504.3467 m	N/A
RT3	12.7154	972.1139 m	N/A
RT4	56.7727	923.1771 m	N/A
Thermal Capacitance (Joules/ $^{\circ}\text{C}$)			
Junction to	Ambient	Case	Foot
CT1	6.5672 m	1.9260 m	N/A
CT2	27.5455 m	787.5516 u	N/A
CT3	107.3820 m	18.2079 m	N/A
CT4	1.2177	9.3126 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	7.4585	6.0391 m	N/A
RF2	9.7845	670.9463 m	N/A
RF3	11.0215	1.0320	N/A
RF4	52.7355	691.0146 m	N/A
Thermal Capacitance (Joules/ $^{\circ}\text{C}$)			
Junction to	Ambient	Case	Foot
CF1	5.7772 m	125.4667 u	N/A
CF2	22.9987 m	695.7232 u	N/A
CF3	156.0909 m	6.0783 m	N/A
CF4	1.1367	527.9622 u	N/A

Note

NA indicates not applicable

