

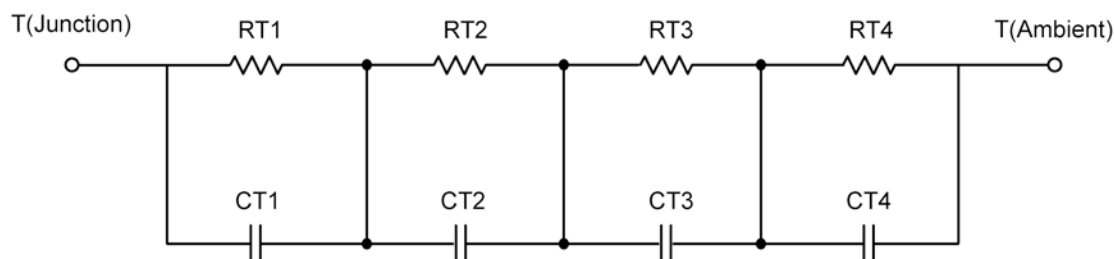
R-C Thermal Model Parameters

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.

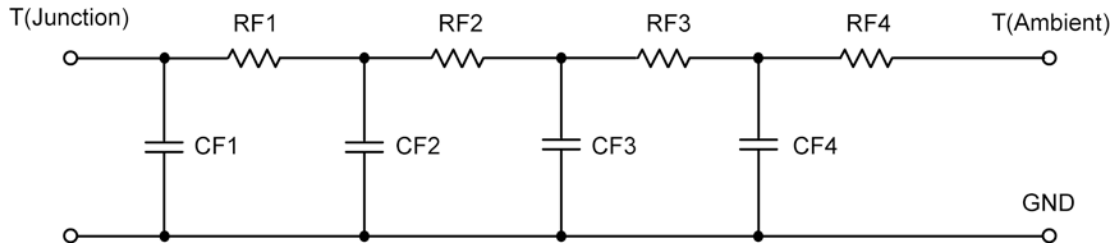
These RC values can be used in the P-SPICE simulation to evaluate the thermal behavior of the MOSFET junction temperature under a defined power profile. These techniques are described in Application Note AN609, "Thermal Simulation of Power MOSFETs on the P-Spice Platform."

R-C THERMAL MODEL FOR TANK CONFIGURATION



R-C VALUES FOR TANK CONFIGURATION			
Thermal Resistance (°C/W)			
Junction to	Ambient	Case	Foot
RT1	4.3610	449.5959 m	N/A
RT2	44.1050	527.9948 m	N/A
RT3	9.7155	787.1093 m	N/A
RT4	11.8185	835.3000 m	N/A
Thermal Capacitance (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	17.2081 m	810.0799 u	N/A
CT2	1.8340	7.6370 m	N/A
CT3	2.9242	19.7616 m	N/A
CT4	152.4121 m	18.6188 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	2.5886	459.8317 m	N/A
RF2	10.2367	486.5683 m	N/A
RF3	13.1702	608.5000 m	N/A
RF4	44.0045	1.0451	N/A
Thermal Capacitance (Joules/ $^{\circ}\text{C}$)			
Junction to	Ambient	Case	Foot
CF1	11.2990 m	597.3384 u	N/A
CF2	49.0517 m	1.7484 m	N/A
CF3	340.6511 m	3.4588 m	N/A
CF4	1.1811	4.2270 m	N/A

Note: NA indicates not applicable

