



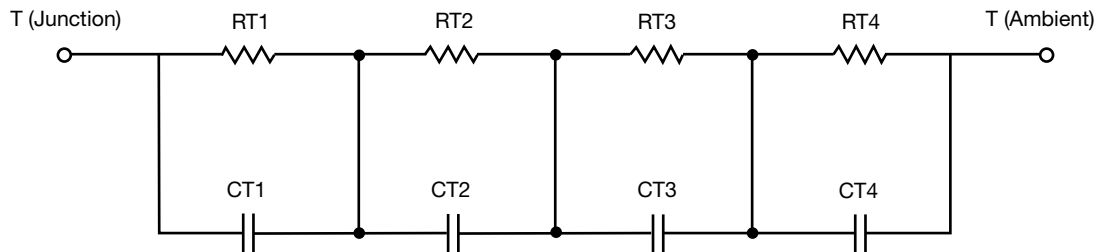
# R-C Thermal Model Parameters

## 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	182.8513	N/A	N/A
RT2	53.3698	N/A	N/A
RT3	293.2723	N/A	N/A
RT4	116.3157	N/A	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	1.6618m	N/A	N/A
CT2	161.6648u	N/A	N/A
CT3	4.3408m	N/A	N/A
CT4	126.7726m	N/A	N/A

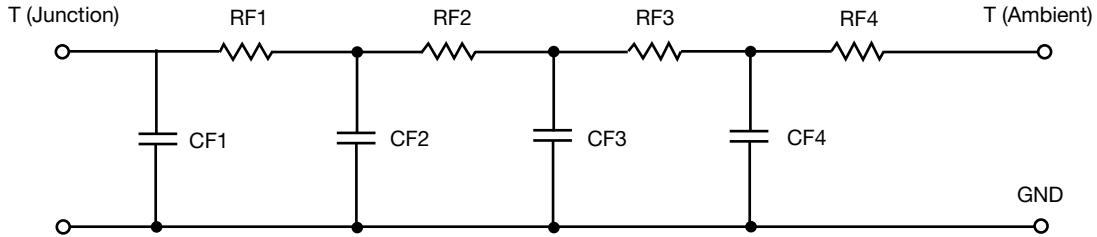
### Note

- 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.



R-C THERMAL MODEL FOR FILTER CONFIGURATION



R-C VALUES FOR FILTER CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RF1	67.8843	N/A	N/A
RF2	296.7408	N/A	N/A
RF3	185.2792	N/A	N/A
RF4	96.4249	N/A	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	163.0989u	N/A	N/A
CF2	1.0055m	N/A	N/A
CF3	5.1616m	N/A	N/A
CF4	143.6464m	N/A	N/A

Note

- n/a indicates not applicable

