



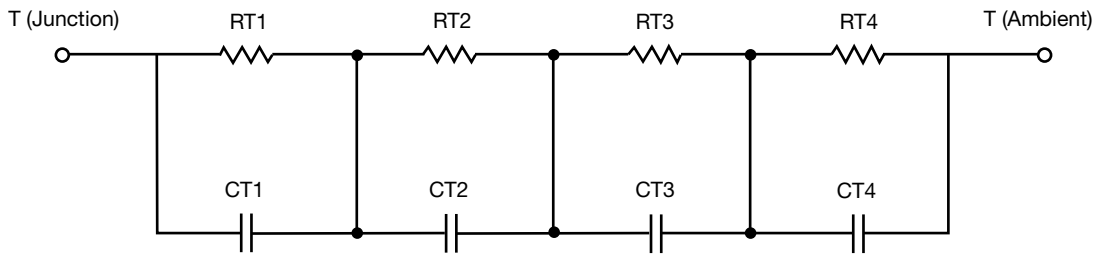
R-C Thermal Model Parameters

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 PSpice, 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 PSpice 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 PSpice Platform".

R-C THERMAL MODEL FOR TANK CONFIGURATION



R-C VALUES FOR TANK CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RT1	55.8725	957.8447m	n/a
RT2	13.5012	738.6755m	n/a
RT3	11.6723	873.4124m	n/a
RT4	3.7254	521.9998m	n/a
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	1.3669	14.4105m	n/a
CT2	249.3409m	14.0341m	n/a
CT3	19.4187m	14.2377m	n/a
CT4	4.8129m	1.4934m	n/a

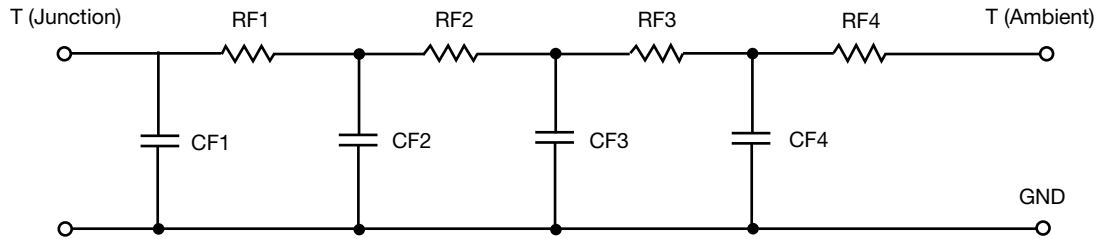
Note

- 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	4.7887	803.6992m	n/a
RF2	12.6781	778.5219m	n/a
RF3	17.3628	787.6019m	n/a
RF4	50.3130	720.2794m	n/a
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	2.8671m	1.1114m	n/a
CF2	15.6051m	3.1429m	n/a
CF3	223.8816m	1.7505m	n/a
CF4	1.2718	434.2896u	n/a

Note

- n/a indicates not applicable

