



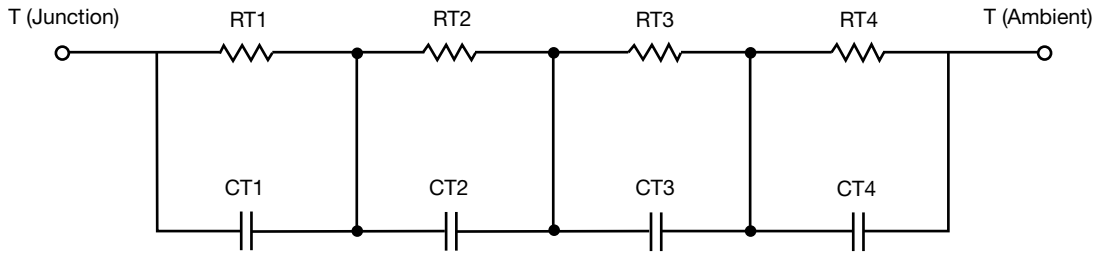
R-C Thermal Model Parameters

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	694.3000m	296.6936m	n/a
RT2	9.3032	610.0742m	n/a
RT3	8.7113	365.6244m	n/a
RT4	46.2912	527.6078m	n/a
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	871.7000u	1.3146m	n/a
CT2	620.8391m	25.4316m	n/a
CT3	49.7339m	69.5609m	n/a
CT4	1.5062	20.3080m	n/a

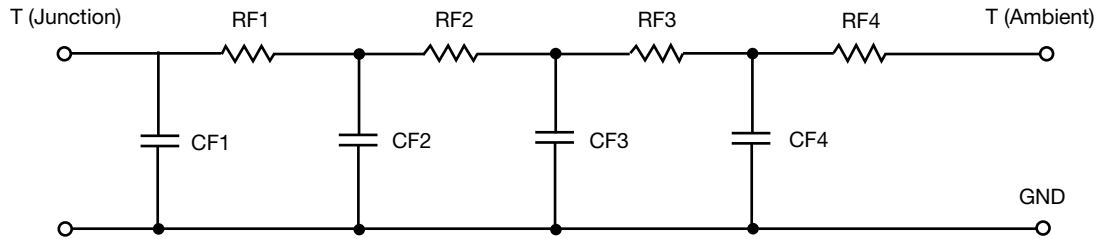
Note

- 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	918.0000m	184.0892m	n/a
RF2	11.0536	478.5331m	n/a
RF3	16.4280	805.9101m	n/a
RF4	36.6004	331.4676m	n/a
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	1.5383m	873.3927u	n/a
CF2	46.4399m	2.2769m	n/a
CF3	476.6256m	11.7820m	n/a
CF4	1.2894	4.8002m	n/a

Note

- n/a indicates not applicable

