



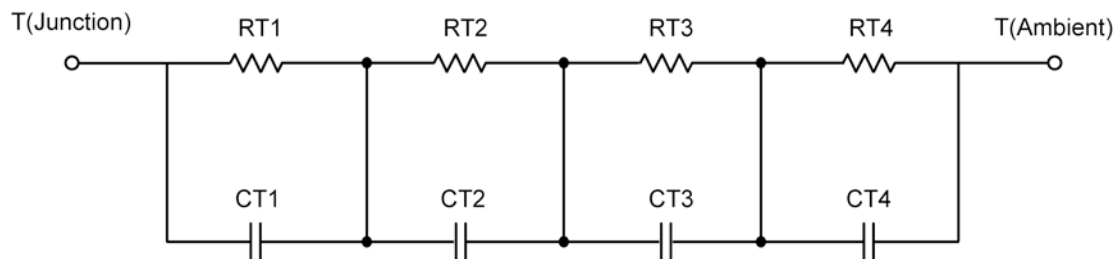
R-C Thermal Model Parameters

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.

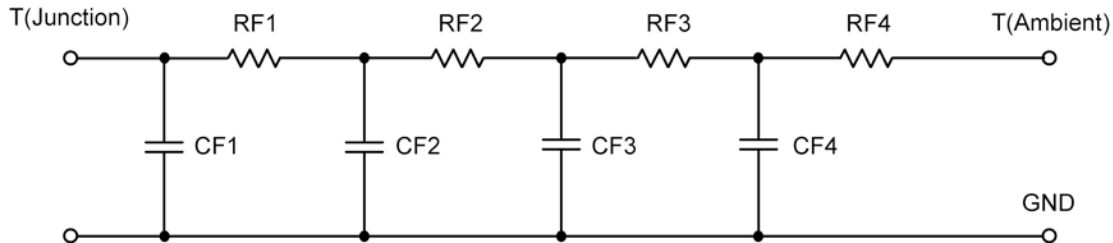
These RC values can be used in the P-SPICE simulation to evaluate the thermal behavior of the MOSFET junction temperature under a defined power profile. These techniques are described in Application Note AN609, "Thermal Simulation of Power MOSFETs on the P-Spice Platform."

R-C THERMAL MODEL FOR TANK CONFIGURATION



R-C VALUES FOR TANK CONFIGURATION			
Thermal Resistance (°C/W)			
Junction to	Ambient	Case	Foot
RT1	3.9727	N/A	727.6000 m
RT2	13.6937	N/A	5.6278
RT3	14.5078	N/A	9.0990
RT4	52.8258	N/A	5.5456
Thermal Capacitance (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	6.3003 m	N/A	7.7219 m
CT2	125.2802 m	N/A	66.4017 m
CT3	67.4477 m	N/A	259.9112 m
CT4	1.3601	N/A	8.6418 m

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	5.9390	N/A	1.2138
RF2	25.3353	N/A	6.9495
RF3	32.1054	N/A	6.9660
RF4	21.6203	N/A	5.8707
Thermal Capacitance (Joules/ $^{\circ}\text{C}$)			
Junction to	Ambient	Case	Foot
CF1	6.6889 m	N/A	2.9141 m
CF2	35.4471 m	N/A	4.8120 m
CF3	959.2908 m	N/A	61.3961 m
CF4	1.9176	N/A	294.9013 m

Note: NA indicates not applicable

