

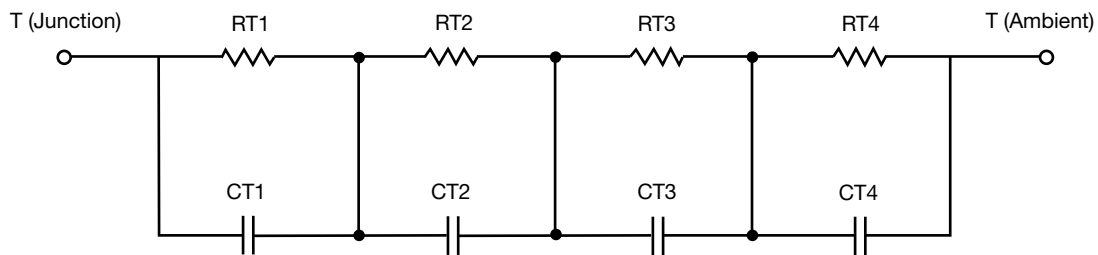
## R-C Thermal Model Parameters

### 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

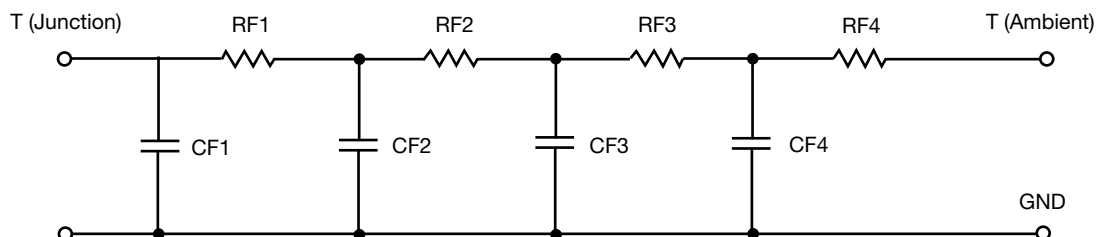


R-C VALUES FOR TANK CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RT1	43.6994	N/A	86.4552
RT2	34.4547	N/A	28.2822
RT3	189.8705	N/A	66.7214
RT4	140.4701	N/A	117.5861
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	348.3455m	N/A	583.2469u
CT2	89.3710u	N/A	43.9099u
CT3	5.6212m	N/A	33.8964m
CT4	1.1206m	N/A	2.7410m

#### 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**

<b>R-C VALUES FOR FILTER CONFIGURATION</b>			
<b>THERMAL RESISTANCE (°C/W)</b>			
<b>Junction to</b>	<b>Ambient</b>	<b>Case</b>	<b>Foot</b>
RF1	38.8381	N/A	34.6397
RF2	184.0560	N/A	122.4750
RF3	152.7745	N/A	100.1321
RF4	33.5431	N/A	42.1701
<b>THERMAL CAPACITANCE (Joules/°C)</b>			
<b>Junction to</b>	<b>Ambient</b>	<b>Case</b>	<b>Foot</b>
CF1	73.9759u	N/A	49.6912u
CF2	831.2355u	N/A	431.4476u
CF3	5.8851m	N/A	3.3530m
CF4	604.5812m	N/A	54.2251m

**Note**

N/A indicates not applicable

