

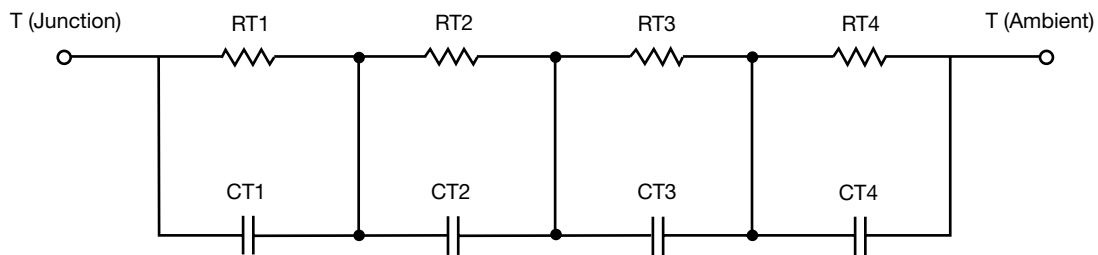
## R-C Thermal Model Parameters

### 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



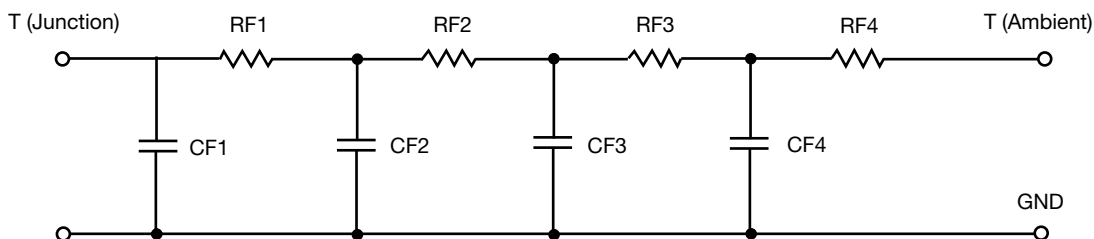
R-C VALUES FOR TANK CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RT1	9.4413	31.1255m	N/A
RT2	50.1886	1.2777	N/A
RT3	11.6344	493.1181m	N/A
RT4	9.4673	595.8615m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	72.5897m	13.6597m	N/A
CT2	1.2758	6.9733m	N/A
CT3	554.0423m	20.0971m	N/A
CT4	8.8445m	1.2129m	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**



<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	4.5188	724.8392m	N/A
RF2	13.2316	1.3886	N/A
RF3	16.1958	294.9620m	N/A
RF4	46.6235	2.8833m	N/A
<b>THERMAL CAPACITANCE (Joules/°C)</b>			
<b>Junction to</b>	<b>Ambient</b>	<b>Case</b>	<b>Foot</b>
CF1	3.2497m	857.3130u	N/A
CF2	17.2414m	3.2910m	N/A
CF3	206.3261m	20.0600m	N/A
CF4	1.0377	3.0132m	N/A

**Note**

N/A indicates not applicable

