



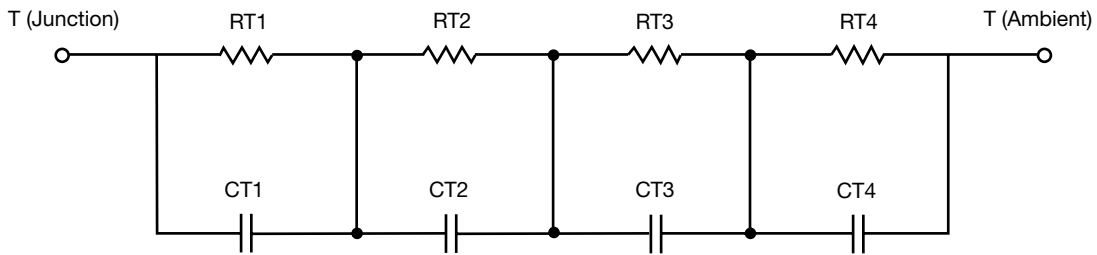
### R-C Thermal Model Parameters

#### 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



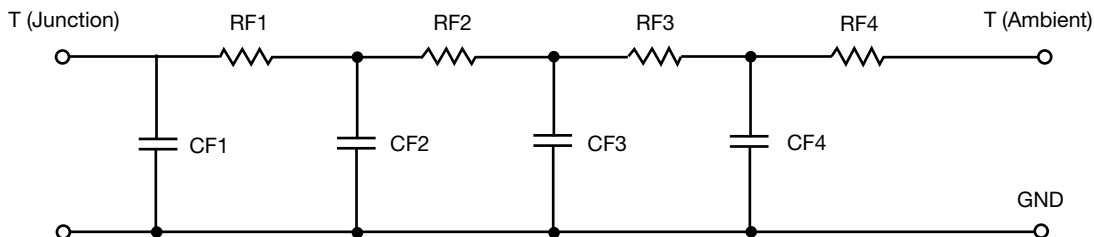
R-C VALUES FOR TANK CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RT1	N/A	597.5121 m	N/A
RT2	N/A	377.1807 m	N/A
RT3	N/A	1.2134	N/A
RT4	N/A	111.9014 m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	N/A	251.1440 m	N/A
CT2	N/A	6.5420 m	N/A
CT3	N/A	18.5835 m	N/A
CT4	N/A	707.3705 u	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	N/A	176.1548 m	N/A
RF2	N/A	700.0557 m	N/A
RF3	N/A	1.0669	N/A
RF4	N/A	356.8895 m	N/A
<b>THERMAL CAPACITANCE (Joules/°C)</b>			
<b>Junction to</b>	<b>Ambient</b>	<b>Case</b>	<b>Foot</b>
CF1	N/A	614.4743 u	N/A
CF2	N/A	4.8923 m	N/A
CF3	N/A	18.9354 m	N/A
CF4	N/A	414.8534 m	N/A

**Note**

- N/A indicates not applicable

