



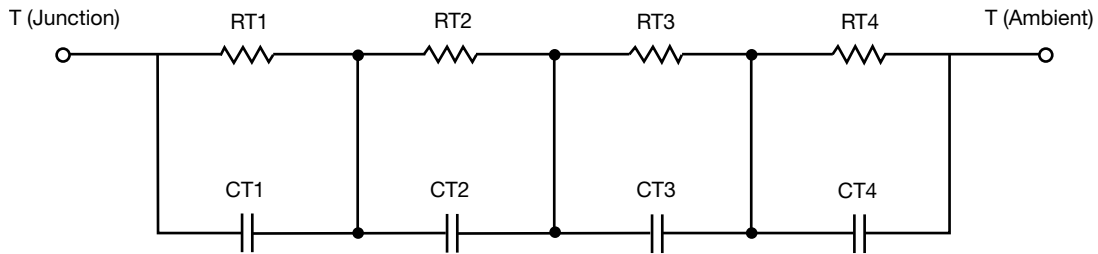
# R-C Thermal Model Parameters

## 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

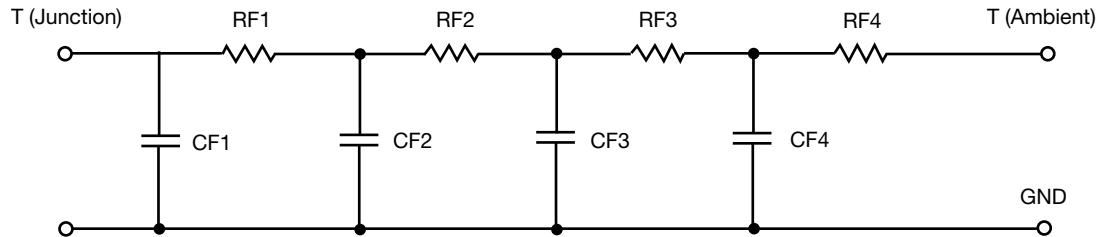


R-C VALUES FOR TANK CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RT1	n/a	87.1677m	n/a
RT2	n/a	792.9652m	n/a
RT3	n/a	816.3621m	n/a
RT4	n/a	303.5050m	n/a
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	n/a	203.3449m	n/a
CT2	n/a	203.3449m	n/a
CT3	n/a	1.1565m	n/a
CT4	n/a	12.4985m	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	n/a	421.4858m	n/a
RF2	n/a	750.9027m	n/a
RF3	n/a	571.7515m	n/a
RF4	n/a	255.8600m	n/a
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	n/a	463.1597u	n/a
CF2	n/a	50.8815u	n/a
CF3	n/a	62.6309u	n/a
CF4	n/a	20.7511m	n/a

**Note**

- n/a indicates not applicable

