

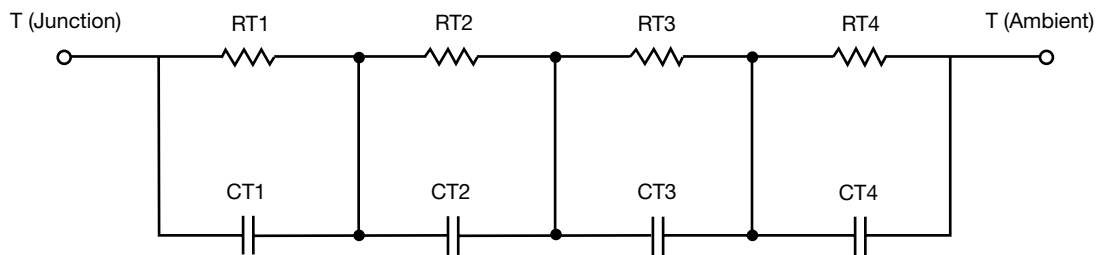
## R-C Thermal Model Parameters

### 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



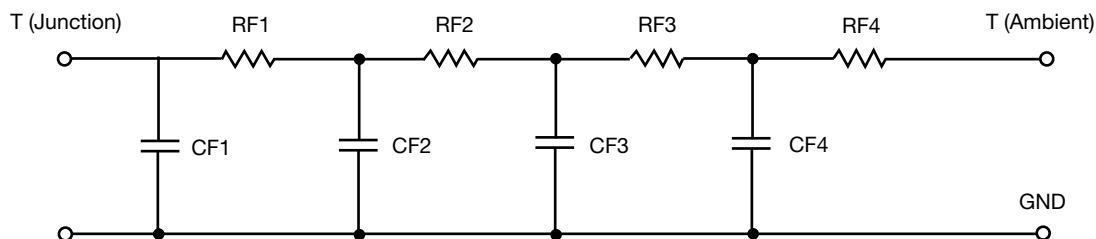
R-C VALUES FOR TANK CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RT1	N/A	395.0039 m	N/A
RT2	N/A	303.0355 m	N/A
RT3	N/A	220.6028 m	N/A
RT4	N/A	81.3578 m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	N/A	129.5397 m	N/A
CT2	N/A	40.1373 m	N/A
CT3	N/A	10.9704 m	N/A
CT4	N/A	1.8584 m	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	67.7708 m	N/A
RF2	N/A	296.2479 m	N/A
RF3	N/A	389.7611 m	N/A
RF4	N/A	246.2202 m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	N/A	973.3826 u	N/A
CF2	N/A	5.2380 m	N/A
CF3	N/A	21.6172 m	N/A
CF4	N/A	182.6481 m	N/A

**Note**

- N/A indicates not applicable

