

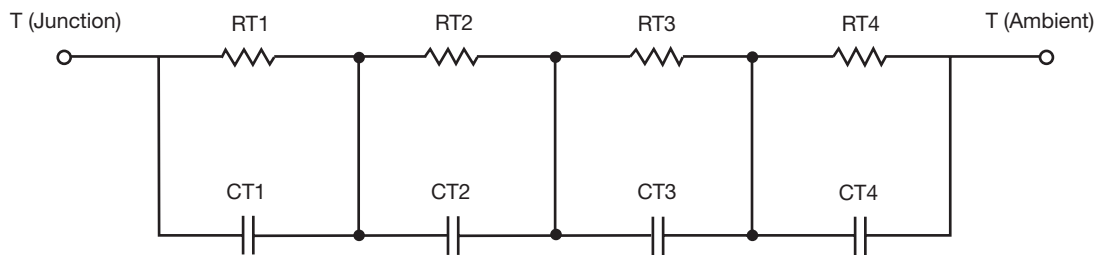
## R-C Thermal Model Parameters

### 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	174.0014 m	N/A
RT2	N/A	68.4202 m	N/A
RT3	N/A	244.1997 m	N/A
RT4	N/A	13.3787 m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	N/A	172.4102 m	N/A
CT2	N/A	32.5056 m	N/A
CT3	N/A	976.8737 m	N/A
CT4	N/A	1.8109 m	N/A

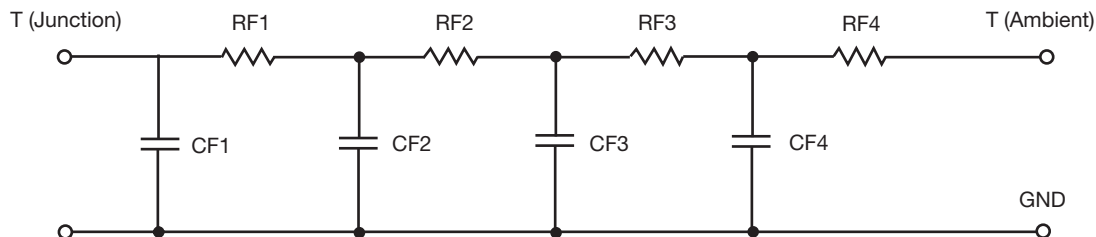
#### Note

- 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	59.9321 m	N/A
RF2	N/A	140.1725 m	N/A
RF3	N/A	155.8882 m	N/A
RF4	N/A	144.0072 m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	N/A	9.8251 m	N/A
CF2	N/A	71.0127 m	N/A
CF3	N/A	198.1135 m	N/A
CF4	N/A	1.4688	N/A

**Note**

- N/A indicates not applicable

