

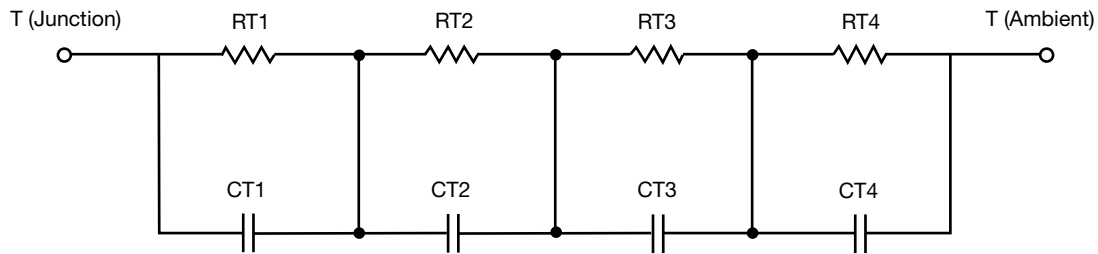
## R-C Thermal Model Parameters

### 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	559.2762m	n/a
RT2	n/a	1.3254	n/a
RT3	n/a	667.4831m	n/a
RT4	n/a	947.8407m	n/a
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	n/a	11.1836m	n/a
CT2	n/a	64.3204m	n/a
CT3	n/a	160.0806u	n/a
CT4	n/a	1.2994	n/a

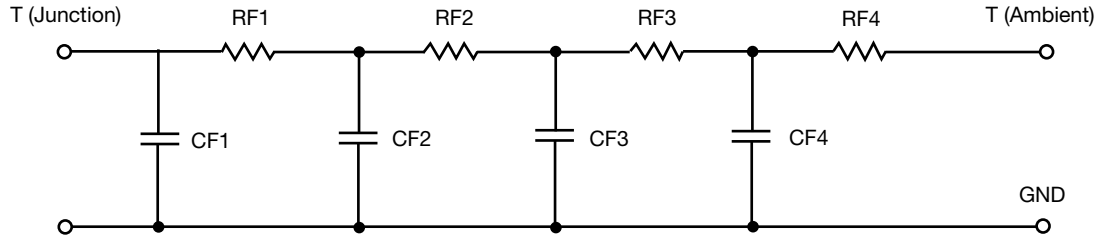
#### Note

- 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	713.1680m	n/a
RF2	n/a	903.6645m	n/a
RF3	n/a	1.1075	n/a
RF4	n/a	775.6675m	n/a
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	n/a	163.1051u	n/a
CF2	n/a	12.2731m	n/a
CF3	n/a	78.8478m	n/a
CF4	n/a	1.5027	n/a

Note

- n/a indicates not applicable

