



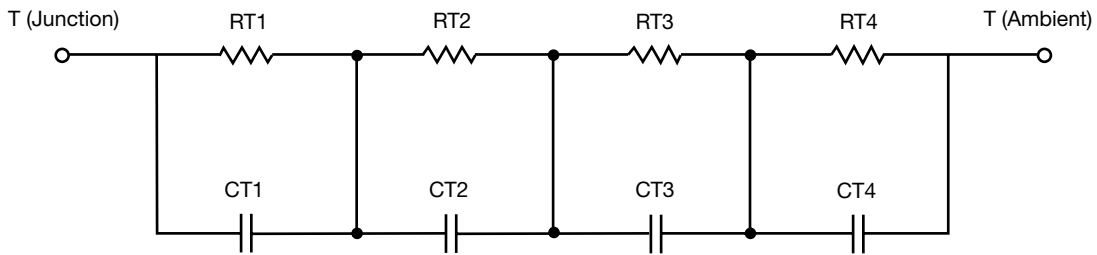
### R-C Thermal Model Parameters

#### 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	297.6379 m	N/A
RT2	N/A	310.7405 m	N/A
RT3	N/A	110.4622 m	N/A
RT4	N/A	31.1594 m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	N/A	184.7934 m	N/A
CT2	N/A	29.0143 m	N/A
CT3	N/A	9.3393 m	N/A
CT4	N/A	1.4837 m	N/A

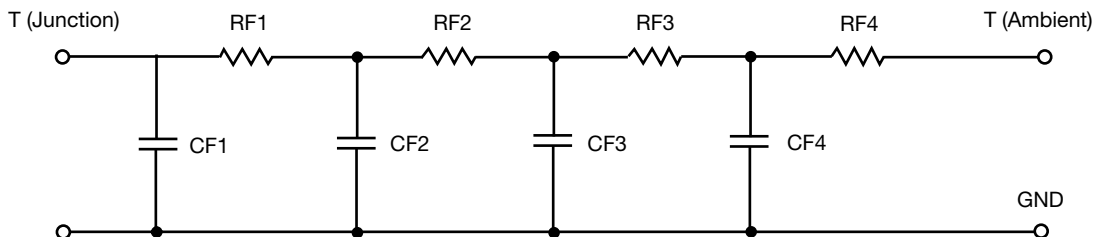
**Note**

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	85.7925 m	N/A
RF2	N/A	230.8984 m	N/A
RF3	N/A	342.7778 m	N/A
RF4	N/A	90.5313 m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	N/A	2.2590 m	N/A
CF2	N/A	8.4525 m	N/A
CF3	N/A	40.7966 m	N/A
CF4	N/A	1.2606	N/A

**Note**

N/A indicates not applicable

