

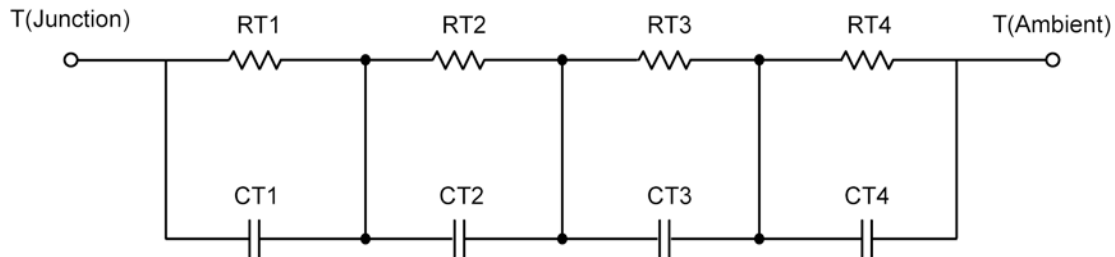
R-C Thermal Model Parameters

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.

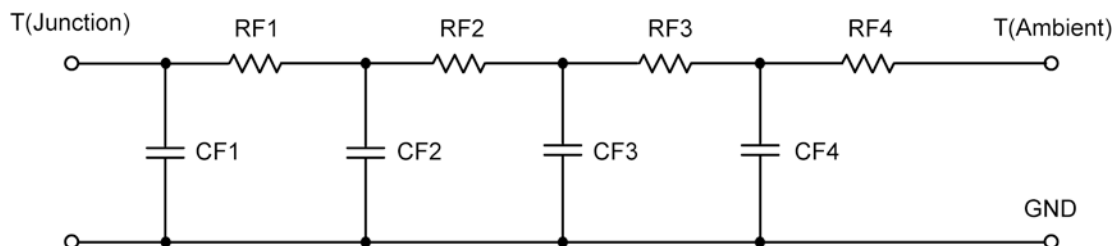
These RC values can be used in the P-SPICE simulation to evaluate the thermal behavior of the MOSFET junction temperature under a defined power profile. These techniques are described in Application Note AN609, "Thermal Simulation of Power MOSFETs on the P-Spice Platform."

R-C THERMAL MODEL FOR TANK CONFIGURATION



R-C VALUES FOR TANK CONFIGURATION			
Thermal Resistance (°C/W)			
Junction to	Ambient	Case	Foot
RT1	11.5171	1.4383	N/A
RT2	6.0148	809.2000 m	N/A
RT3	5.1421	1.0586	N/A
RT4	47.3269	1.1939	N/A
Thermal Capacitance (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	75.2435 m	31.1643 m	N/A
CT2	574.0723 m	1.2591 m	N/A
CT3	4.9948 m	56.0407 m	N/A
CT4	1.3267	147.8168 m	N/A

This document is intended as a SPICE modeling guideline and does not constitute a commercial product data sheet. Designers should refer to the appropriate data sheet of the same number for guaranteed specification limits.

R-C THERMAL MODEL FOR FILTER CONFIGURATION**R-C VALUES FOR FILTER CONFIGURATION**

Thermal Resistance ($^{\circ}\text{C}/\text{W}$)			
Junction to	Ambient	Case	Foot
RF1	4.7973	798.0400 m	N/A
RF2	11.2667	1.1804	N/A
RF3	10.6176	1.7079	N/A
RF4	43.3184	813.6600 m	N/A
Thermal Capacitance (Joules/ $^{\circ}\text{C}$)			
Junction to	Ambient	Case	Foot
CF1	2.8501 m	1.0562 m	N/A
CF2	48.3368 m	12.3971 m	N/A
CF3	186.3431 m	6.8354 m	N/A
CF4	1.2051	150.0464 m	N/A

Note

NA indicates not applicable

