

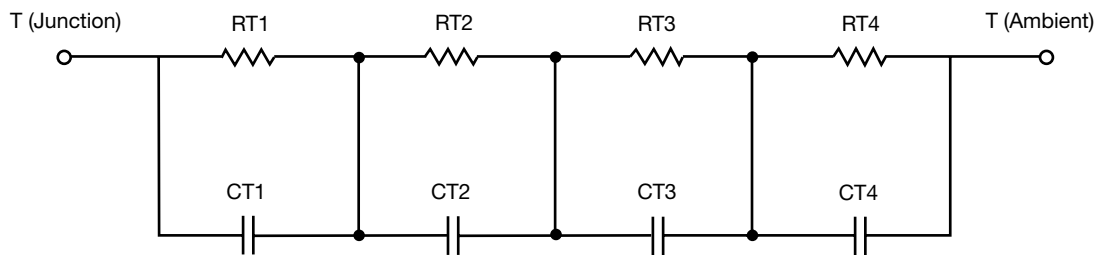
R-C Thermal Model Parameters

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



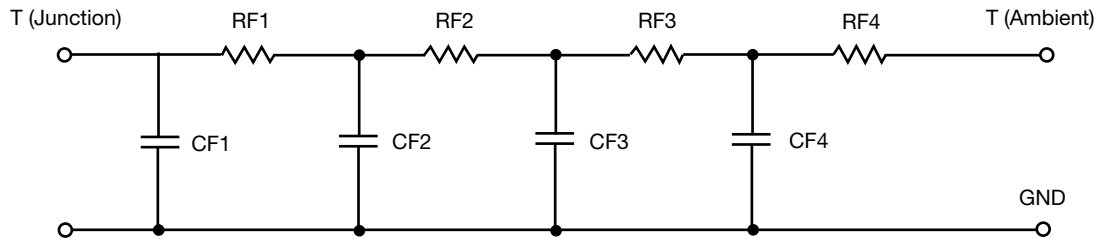
R-C VALUES FOR TANK CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RT1	11.3120	414.7747m	N/A
RT2	51.4059	1.4422	N/A
RT3	11.2336	916.9437m	N/A
RT4	6.5846	1.0298	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	31.4330m	31.1422m	N/A
CT2	1.3301	8.8733m	N/A
CT3	170.5334m	21.8929m	N/A
CT4	4.7728m	648.7810u	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	6.3364	1.1491	N/A
RF2	16.9714	1.8949	N/A
RF3	14.0295	760.2877m	N/A
RF4	43.4528	3.8825m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	3.0066m	560.2845u	N/A
CF2	18.5039m	3.7799m	N/A
CF3	345.5978m	14.9677m	N/A
CF4	1.2711	19.4936m	N/A

Note

N/A indicates not applicable

