

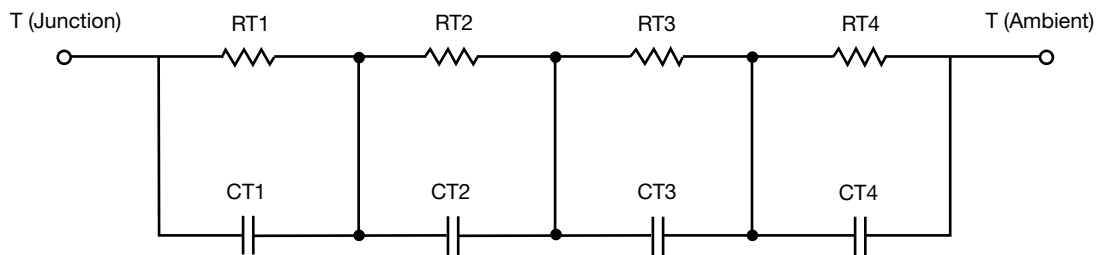
R-C Thermal Model Parameters

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

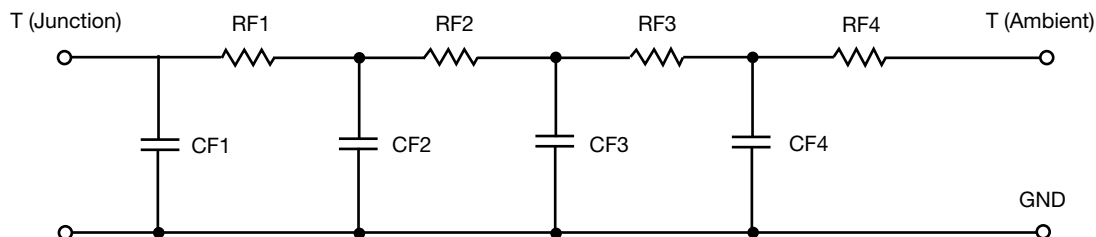


R-C VALUES FOR TANK CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RT1	40.4458	N/A	7.6388
RT2	9.5872	N/A	9.0729
RT3	49.1499	N/A	28.9978
RT4	64.7273	N/A	3.9983
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	2.9637m	N/A	16.6440m
CT2	588.6197u	N/A	8.6535m
CT3	16.9627m	N/A	23.3598m
CT4	1.1841	N/A	579.2125u

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	14.2568	N/A	5.5922
RF2	54.1357	N/A	14.0345
RF3	33.3884	N/A	12.3087
RF4	62.3107	N/A	17.7649
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	485.8230u	N/A	684.5656u
CF2	2.2544m	N/A	3.7143m
CF3	26.7717m	N/A	3.9848m
CF4	1.2298	N/A	26.6315m

Note

N/A indicates not applicable

