



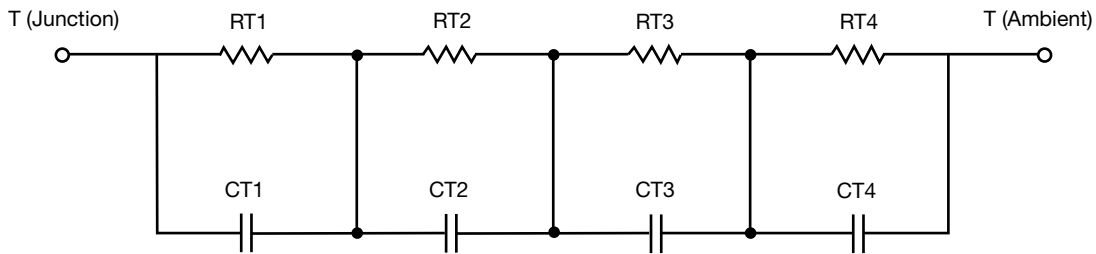
R-C Thermal Model Parameters

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	2.7984	526.7789m	n/a
RT2	13.7844	774.9029m	n/a
RT3	9.4372	175.8292m	n/a
RT4	54.722	1.2324	n/a
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	4.0337m	765.2359u	n/a
CT2	20.8047m	22.9185m	n/a
CT3	368.2757m	202.3951m	n/a
CT4	1.3098	6.7762m	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	2.7646	693.4762m	n/a
RF2	16.0277	1.6941	n/a
RF3	13.5327	309.9241m	n/a
RF4	48.3329	56.7368m	n/a
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	2.0145m	693.3295u	n/a
CF2	16.1510m	4.6786m	n/a
CF3	334.6290m	44.9423m	n/a
CF4	1.0787	136.2289	n/a

Note

- n/a indicates not applicable

