



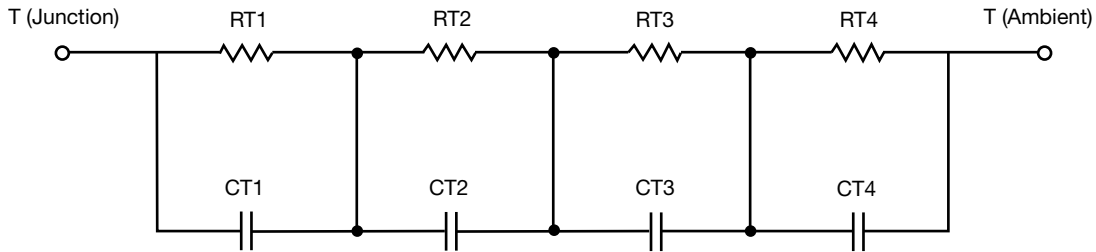
R-C Thermal Model Parameters

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	1.3922	692.5671m	N/A
RT2	7.9199	2.8643	N/A
RT3	10.2829	1.8819	N/A
RT4	50.1913	140.3151m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	1.9083m	1.5441m	N/A
CT2	36.2534m	9.9329	N/A
CT3	339.8206m	7.9994m	N/A
CT4	1.3179	192.7005m	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	2.9151	1.1576	N/A
RF2	11.6144	1.5252	N/A
RF3	20.1870	223.2728m	N/A
RF4	35.2449	69.3834m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	9.4056m	1.4507m	N/A
CF2	36.2372m	9.1558m	N/A
CF3	538.3231m	1.1691	N/A
CF4	1.2387	6.1460m	N/A

Note

- n/a indicates not applicable

