



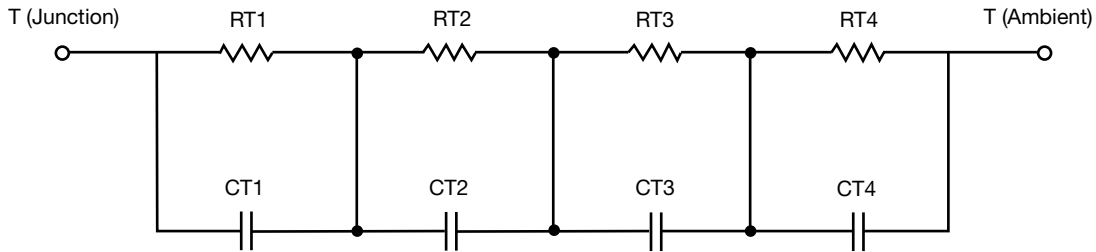
R-C Thermal Model Parameters

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	33.9475	N/A	11.5365
RT2	30.4659	N/A	15.8469
RT3	22.9532	N/A	2.8840
RT4	24.7082	N/A	7.7807
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	2.8500	N/A	4.2529m
CT2	28.4765m	N/A	10.1566m
CT3	2.4353m	N/A	285.6510u
CT4	1.4350	N/A	255.6582m

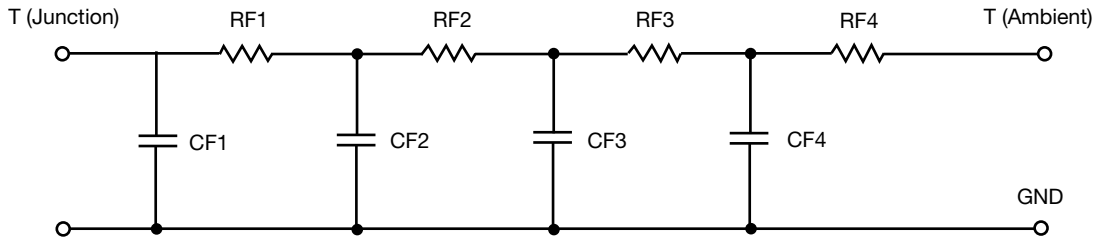
Note

- 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	26.5410	N/A	3.8420
RF2	27.4880	N/A	25.3605
RF3	26.7355	N/A	5.1410
RF4	30.9349	N/A	3.7522
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	2.2828m	N/A	353.2192u
CF2	25.0365m	N/A	3.1313m
CF3	741.0143m	N/A	148.4810m
CF4	1.3259	N/A	13.1305u

Note

- n/a indicates not applicable

