



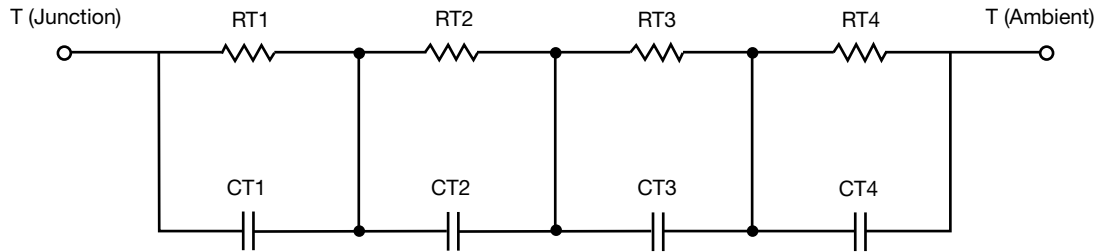
R-C Thermal Model Parameters

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

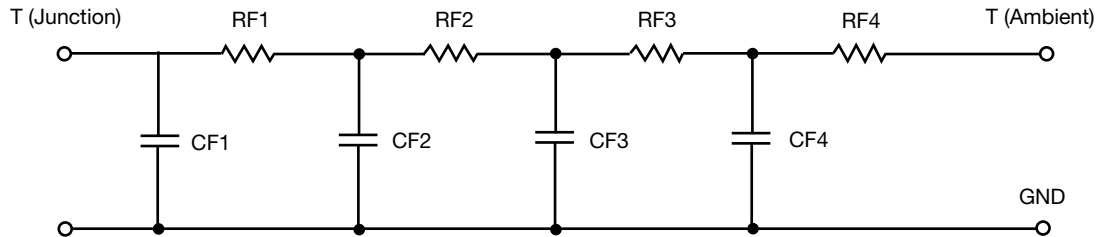


R-C VALUES FOR TANK CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient-Full Copper	Ambient-Minimum Copper	Foot
RT1	49.2602	81.4046	N/A
RT2	62.9323	69.4973	N/A
RT3	28.7047	75.3816	N/A
RT4	41.9763	100.5031	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient-Full Copper	Ambient-Minimum Copper	Foot
CT1	1.2621	313.5334m	N/A
CT2	721.7373u	230.5057u	N/A
CT3	36.7132m	17.3836m	N/A
CT4	134.0744u	1.3735m	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-Full Copper	Ambient-Minimum Copper	Foot
RF1	54.6183	96.3154	N/A
RF2	55.7808	91.2777	N/A
RF3	28.4438	66.3965	N/A
RF4	44.5902	73.0077	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient-Full Copper	Ambient-Minimum Copper	Foot
CF1	109.3494u	199.2947u	N/A
CF2	758.8691u	1.3739m	N/A
CF3	59.9059m	18.9927m	N/A
CF4	1.5317	326.6659m	N/A

Note

- n/a indicates not applicable

