

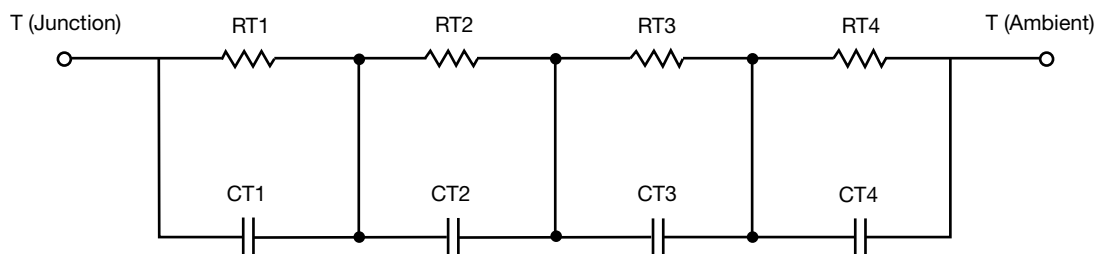
R-C Thermal Model Parameters

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

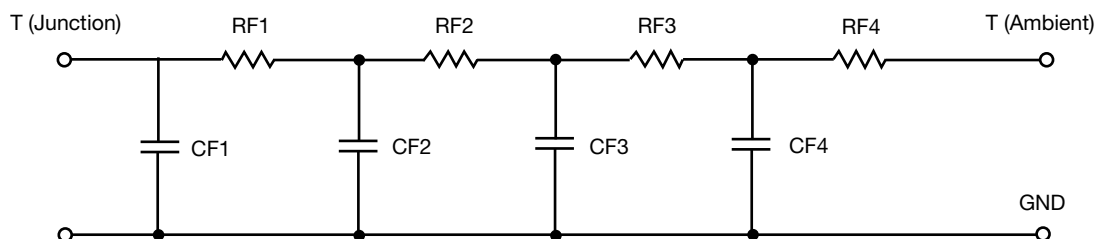


R-C VALUES FOR TANK CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RT1	3.3025	17.5858m	n/a
RT2	14.0911	1.6137	n/a
RT3	14.5113	442.7915m	n/a
RT4	49.0951	325.9227m	n/a
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	4.5201m	81.1878m	n/a
CT2	22.2173m	9.3769m	n/a
CT3	641.6172m	4.9910m	n/a
CT4	1.6842	964.8078u	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	11.8163	825.4753m	n/a
RF2	13.9117	1.2852	n/a
RF3	28.1262	245.0739m	n/a
RF4	27.1458	44.2511m	n/a
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	7.7652m	997.5480u	n/a
CF2	77.3408m	7.5181m	n/a
CF3	988.8559m	286.8383u	n/a
CF4	723.3429m	100.5959m	n/a

Note

- n/a indicates not applicable

