

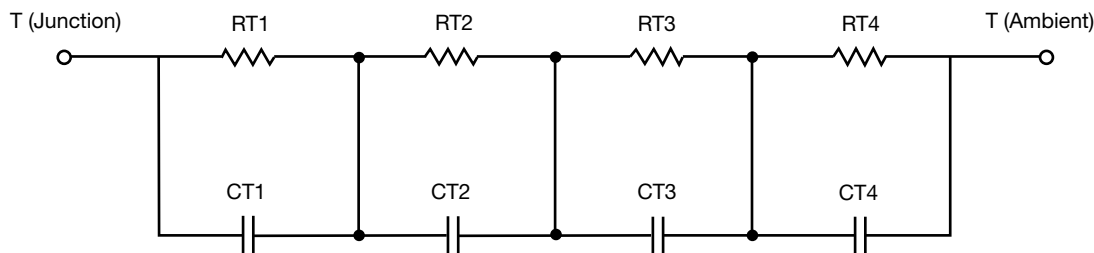
R-C Thermal Model Parameters

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

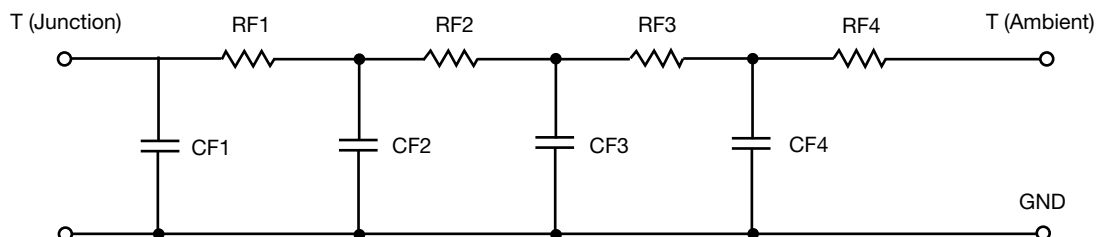


R-C VALUES FOR TANK CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RT1	27.5491	N/A	6.5203
RT2	30.9193	N/A	8.1524
RT3	6.6497	N/A	8.4871
RT4	20.1065	N/A	1.8189
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	43.9587m	N/A	260.3075m
CT2	1.3786	N/A	85.3498m
CT3	7.1000m	N/A	5.7875m
CT4	4.5843	N/A	1.3699m

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	4.7571	N/A	2.8279
RF2	29.8791	N/A	9.7437
RF3	17.1947	N/A	7.5540
RF4	33.1496	N/A	4.8744
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	2.2128m	N/A	768.9306u
CF2	30.3734m	N/A	5.5449m
CF3	691.2265m	N/A	78.3002m
CF4	1.0087	N/A	16.7639m

Note

N/A indicates not applicable

