

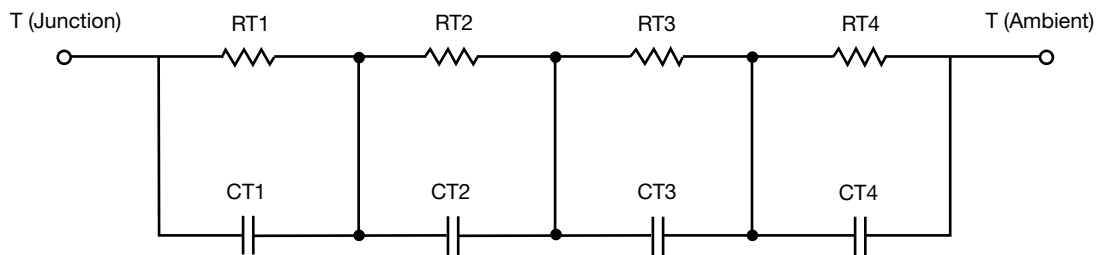
R-C Thermal Model Parameters

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



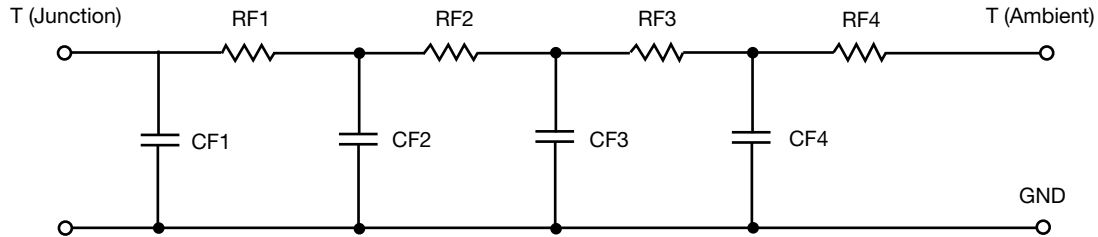
R-C VALUES FOR TANK CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RT1	9.2658	N/A	13.1218
RT2	26.8014	N/A	13.7046
RT3	33.1671	N/A	1.4433
RT4	21.2862	N/A	1.8865
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	4.8576m	N/A	6.5231m
CT2	36.6475m	N/A	111.9808m
CT3	1.3269	N/A	924.4599u
CT4	5.3546	N/A	178.3468m

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	2.4684	N/A	5.0578
RF2	19.6568	N/A	12.6754
RF3	20.1913	N/A	10.3591
RF4	47.7405	N/A	2.0708
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	1.2076m	N/A	2.2590m
CF2	8.8991m	N/A	5.9451m
CF3	91.0959m	N/A	109.0033m
CF4	1.3597	N/A	4.3358m

Note
N/A indicates not applicable

