

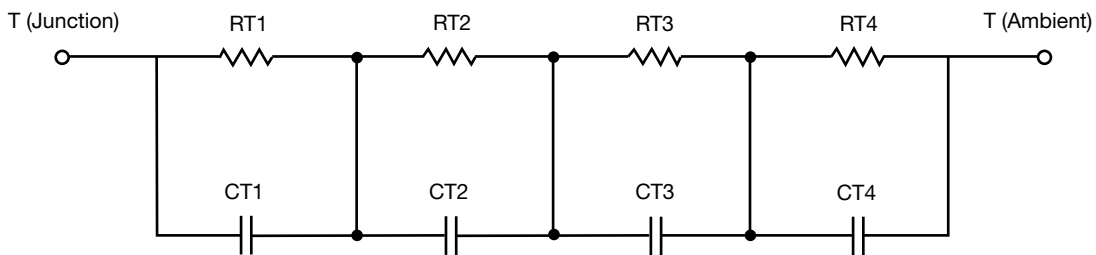
R-C Thermal Model Parameters

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	60.5872	N/A	9.0636
RT2	16.9108	N/A	2.7529
RT3	61.1826	N/A	7.5911
RT4	25.8084	N/A	30.5801
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	1.4432	N/A	4.1430m
CT2	268.8524m	N/A	279.3369u
CT3	6.2265m	N/A	235.0673m
CT4	1.1245m	N/A	12.4003m

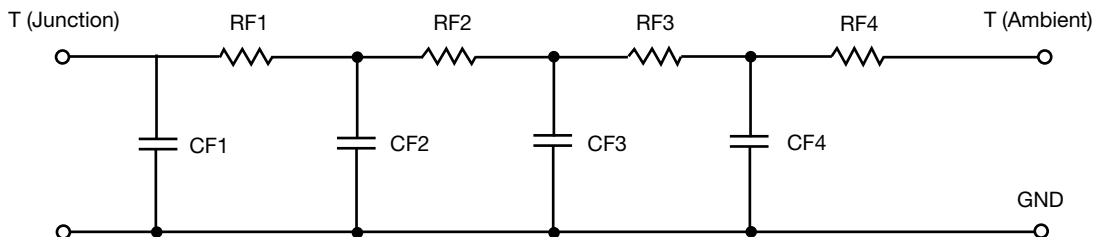
Note

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

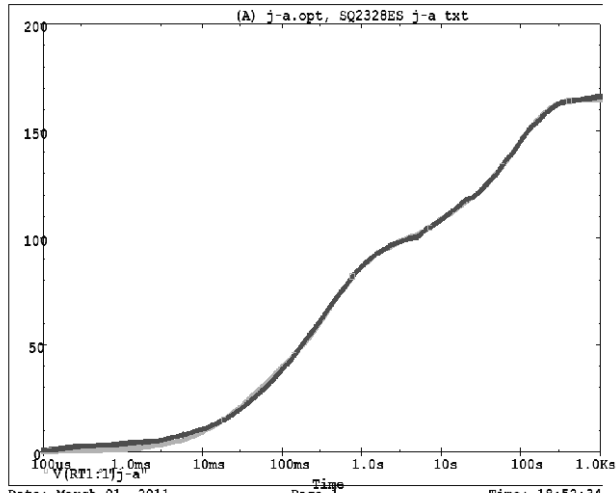


R-C VALUES FOR FILTER CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RF1	13.2458	N/A	4.5767
RF2	47.7806	N/A	19.6106
RF3	39.0015	N/A	23.0119
RF4	63.8436	N/A	3.2552
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	462.9800u	N/A	418.7427u
CF2	2.0270m	N/A	3.7693m
CF3	15.7873m	N/A	15.4893m
CF4	1.1631	N/A	1.0588

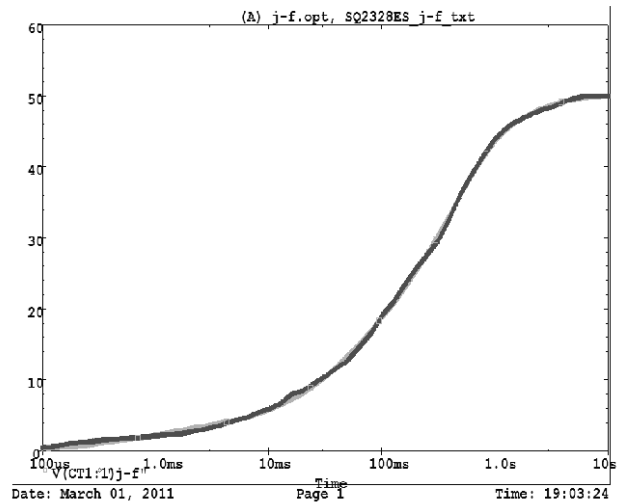
Note
N/A indicates not applicable



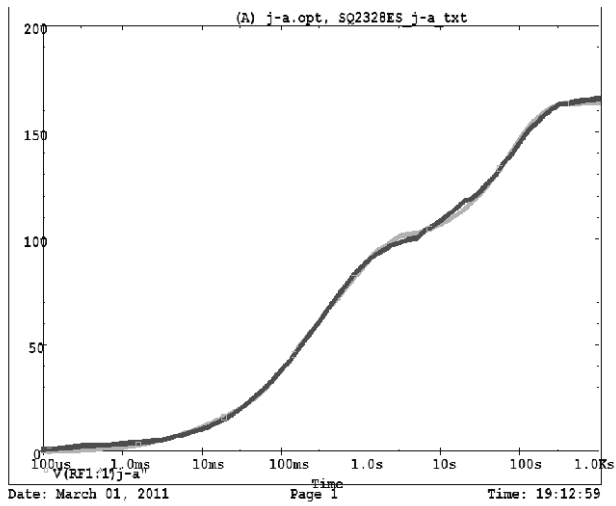
SQ2328ES Tank j-a Temperature: 27.0



SQ2328ES Tank j-f Temperature: 27.0



SQ2328ES Filter j-a Temperature: 27.0



SQ2328ES Filter j-f Temperature: 27.0

