

SiC MOSFET Datasheet

Static characteristics ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Values			Unit	Test Condition
		Min	Typ	Max		
Gate threshold voltage	$V_{GS(th)}$	3	4	5	V	
Drain-Source on-state resistance	$R_{DS(on)}$	-	40	-	m Ω	
Gate internal resistance	$R_{G,int}$	-	6	-	Ω	

Dynamic characteristics ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Values			Unit	Test Condition
		Min	Typ	Max		
Input capacitance	C_{iss}	-	1400	-	pF	
Output capacitance	C_{oss}	-	165	-	pF	
Turn- on delay time	$Td_{(on)}$	-	12	-	ns	$V_{DD} = 400V$ $I_D = 25A$ $V_{GS} = 12V$ $R_G = 2\Omega$ See Figure3.
Rise time	Tr	-	25	-	ns	
Turn-off delay time	$Td_{(off)}$	-	20	-	ns	
Fall time	Tf	-	8	-	ns	

Reverse characteristics ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Values			Unit	Test Condition
		Min	Typ	Max		
Diode forward voltage	V_{SD}	1.4	2	2.6	V	
Reverse recovery charge	Q_{rr}	-	155	-	nC	

Figure 1. Capacitance Characteristics

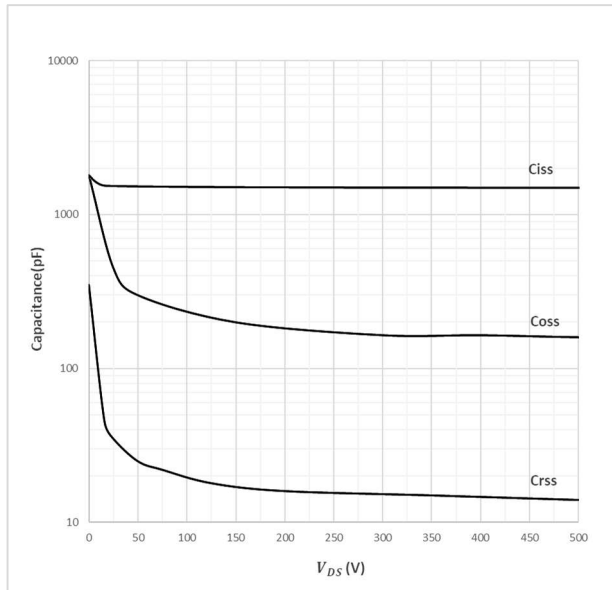


Figure 2. Reverse Drain-Source Characteristics

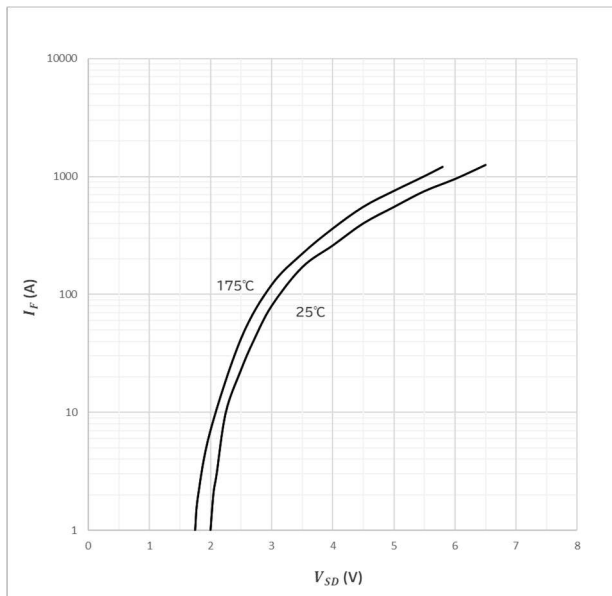


Figure 3. Switching Test Circuit

