

CSM200mA-200V SiC N-MOSFET

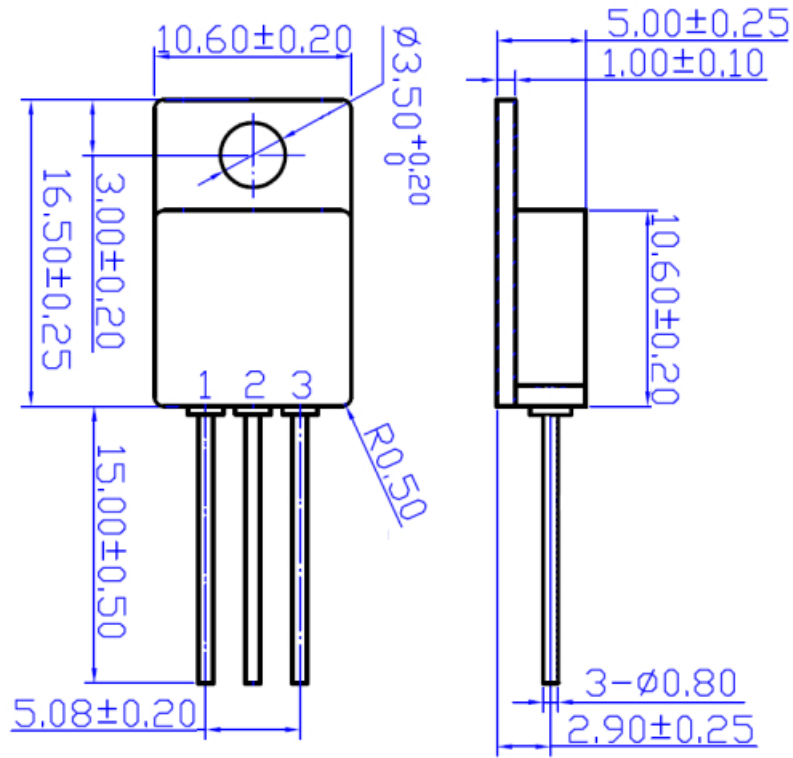
一、最大额定值

Parameter	Symbol	Rating	Unit
Continuous drain current @Tc=25°C	I _D	200	mA
Drain-source Voltage	V _{DSS}	200	V
Pulsed Drain Current @Tc=25°C	I _{DM}	50	A
Gate-source Voltage (DC)	V _{GS}	-4/+21	V
Gate-source Surge Voltage (T _{surge} <300ns)	V _{GS-surge}	-4/+23	
Recommender Turn-on Gate-source Voltage	V _{GS-on}	+15~+18	
Recommender Turn-off Gate-source Voltage	V _{GS-off}	0	V
Operating junction temperature	T _J	225	°C

二、电特性

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Static						
Drain-source breakdown voltage	BV _{DSS}	V _{GS} =0V, I _D =30mA	200			V
Drain-source leakage current	I _{DSS}	V _{DS} =750V, V _{GS} =0V		1	80	uA
Gate threshold voltage	V _{GS(th)}	V _{DS} =10V, I _D =50mA	2.5	3.8	5	V
Gate-source leakage current	I _{GSS+}	V _{GS} =+21V, V _{DS} =0V			100	nA
	I _{GSS-}	V _{GS} =-4V, V _{DS} =0V			-100	
Drain-source on resistance	R _{DS(on)}	V _{GS} =18V, I _D =20A		20	50	mΩ
		V _{GS} =18V, I _D =20A, T _J =225°C		30		
Dynamic						
Total Gate Charge	Q _g	V _{DS} =500V		260		nC
Gate-Source Charge	Q _{gs}	V _{GS} =18V		56		
Gate-Drain Charge	Q _{gd}	I _D =90A		70		
Input Capacitance	C _{iss}	V _{DS} =500V		7500		pF
Output Capacitance	C _{oss}	V _{GS} =0V		310		
Reverse Transfer Capacitance	C _{rss}	f=1MHz		20		
Turn-on time	T _{don}	V _{DS} =400V		32		ns
	t _r	R _G =2		38		
Turn-off time	T _{doff}	I _D =90A		160		
	t _f	V _{GS} =-2V/+18V		10		
Turn-on switch loss	E _{on}	L=250uH		930		uJ
Turn-off switch loss	E _{off}			105		
Body diode electrical characteristics						
Forward voltage	V _{sd}	V _{GS} =0V, I _D =90A		3.25		V
Reverse recovery time	t _{rr}	I _F =90A, V _R =400V		19		Ns
Reverse recovery charge	Q _{rr}	di/dt=3300A/us		775		Nc
Peak reverse recovery current	I _{rrm}	L _o =50nh, C _o =10pF		70		A

外形尺寸及引出端极性如图 1 所示。



引出端极性排列：1—栅极 (G) 2—漏极 (D) 3—源极 (S)

图1 TO-257封装外形尺寸图 (单位: mm)