

20V, 6A N-Channel MOSFET

SOT23-6

General Description

The SK8205DM uses advanced trench technology to provide excellent $R_{DS(ON)}$ and low gate charge. The complementary MOSFETs form a high-speed power inverter, suitable for a multitude of applications.

Product Summary

N-Channel

$V_{DS} = 20V$

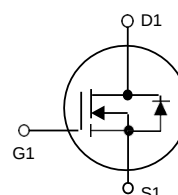
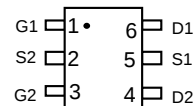
$I_D = 6A$

$R_{DS(ON)} < 25m\Omega$ ($V_{GS} = 4.5V$)

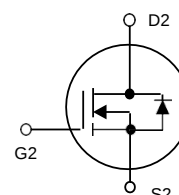
Bottom View



Top View



n-channel



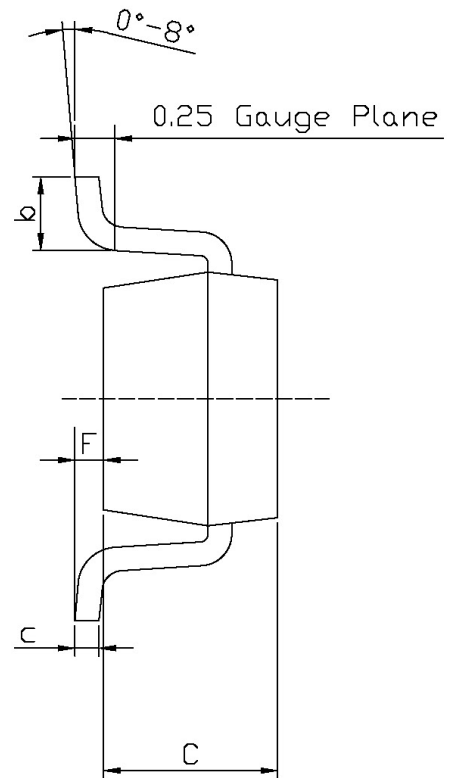
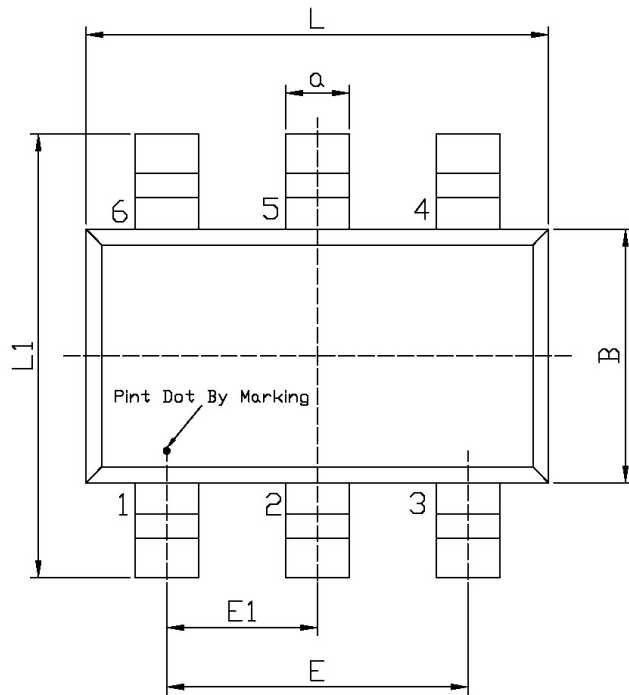
n-channel

Absolute Maximum Ratings $T_A = 25^\circ C$ unless otherwise noted			
Parameter	Symbol	Max n-channel	Units
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 5	V
Continuous Drain Current	I_D	6	A
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^\circ C$

Electrical Characteristics (T_J=25°C unless otherwise noted)

Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Condition
BV _{DSS}	Drain-Source Breakdown Voltage	20	—	—	V	V _{GS} = 0V, I _D = 250μA
BV _{DSS}	Drain-Source Breakdown Voltage	20	—	—	V	V _{GS} = 0V, I _D = 1mA
R _{DS(ON)}	Static Drain-Source On-Resistance	—	—	25	mΩ	V _{GS} = 4.5V, I _D = 1A
V _{GS(th)}	Gate Threshold Voltage	0.5	—	1.2	V	V _{DS} = V _{GS} , I _D = 250μA
V _{SD}	Drain-Source Diode Forward Voltage			1.6	V	V _{GS} = 0V, I _{SD} = 1A
I _{DSS}	Drain-to-Source Leakage Current	—	—	1	μA	V _{DS} = 16V, V _{GS} = 0V
I _{GSS}	Gate-Body Leakage Current	—	—	100	nA	V _{DS} = 0V, V _{GS} = 12V
T _J , T _{STG}	Operating and Storage Temperature	-55°C to 150°C Max.				

Package Dimensions



Unit: mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.82	3.02	E1	0.85	1.05
B	1.50	1.70	a	0.35	0.50
C	0.90	1.30	c	0.10	0.20
L1	2.60	3.00	b	0.35	0.55
E	1.80	2.00	F	0	0.15

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