

## 20V, 6A N-Channel MOSFET

SOT23-6

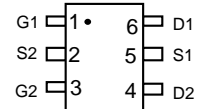
### General Description

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.

Bottom View



Top View



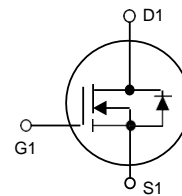
### Product Summary

#### N-Channel

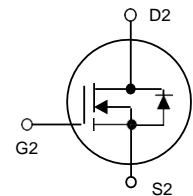
$V_{DS} = 20V$

$I_D = 6A$

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



n-channel



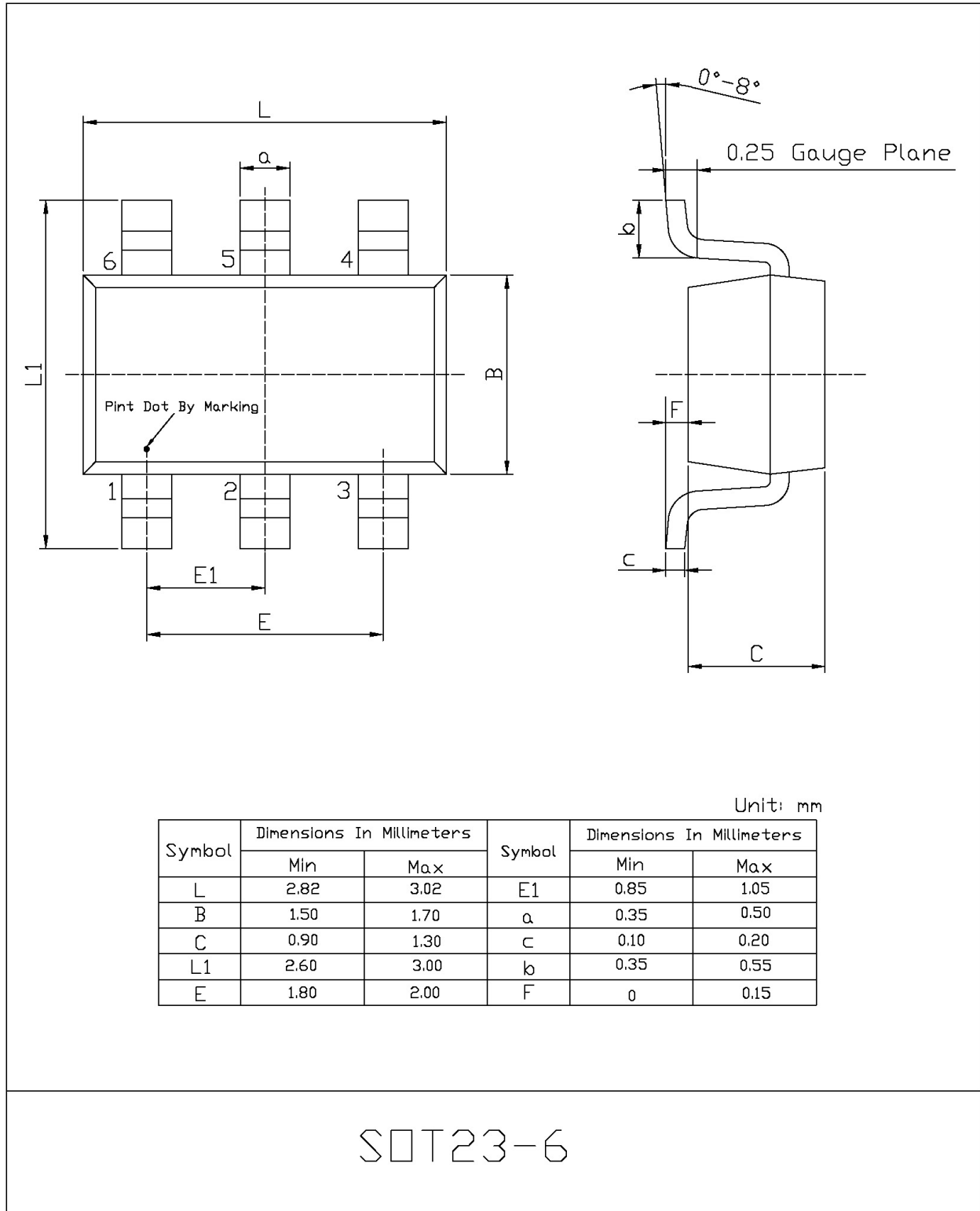
n-channel

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	$V_{GS}$	$\pm 5$	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<sub>J</sub>=25°C unless otherwise noted)

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

Package Dimensions



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