

N-Channel 100 D-S MOSFET

FEATURES

- $R_{DS(ON)} \leq 100m\Omega @ V_{GS}=10V$
- Super high density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability
- Capable doing Cu wire bonding

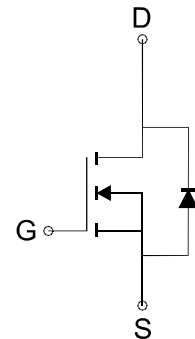
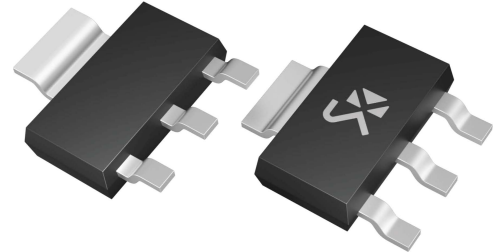
APPLICATIONS

- Power Management in Note book
- Portable Equipment
- Battery Powered System
- Load Switch
- DSC

GENERAL DESCRIPTION

The SKB15N10 is the N-Channel logic enhancement mode power field effect transistors are produced using high cell density, DMOS trench technology. This high density process is especially tailored to minimize on-state resistance.

SOT-223



N-Channel MOSFET

Absolute Maximum Ratings ($T_c=25^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	Maximum Ratings	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	± 20	V

Electrical Characteristics (T_j = 25°C Unless Otherwise Specified)

Symbol	Parameter	Limit	Min	Typ	Max	Unit
STATIC						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250 μA	100			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =250 μA	1		3	V
I _{GSS}	Gate Leakage Current	V _{DS} =0V, V _{GS} =±20V			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =80V, V _{GS} =0V			1	μA
R _{DS(ON)}	Drain-Source On-Resistance ^a	V _{GS} =10V, I _D =8A		80	100	mΩ
V _{SD}	Diode Forward Voltage	I _S =8A, V _{GS} =0V		0.9	1.2	V
DYNAMIC						
Q _g	Total Gate Charge	V _{DS} =80V, V _{GS} =10V, I _D =10A		24		nC
Q _g	Total Gate Charge	V _{DS} =80V, V _{GS} =4.5V, I _D =10A		13		
Q _{gs}	Gate-Source Charge			4.6		
Q _{gd}	Gate-Drain Charge			7.6		
C _{iss}	Input Capacitance	V _{DS} =15V, V _{GS} =0V, f=1MHz		890		pF
C _{oss}	Output Capacitance			58		
C _{rss}	Reverse Transfer Capacitance			23		
R _g	Gate-Resistance	V _{DS} =0V, V _{GS} =0V, f=1MHz		0.9		Ω
t _{d(on)}	Turn-On Delay Time	V _{DS} =50V, R _L =5Ω, V _{GEN} =10V, R _G =1Ω		14		ns
t _r	Turn-On Rise Time			33		
t _{d(off)}	Turn-Off Delay Time			39		
t _f	Turn-Off Fall Time			5		

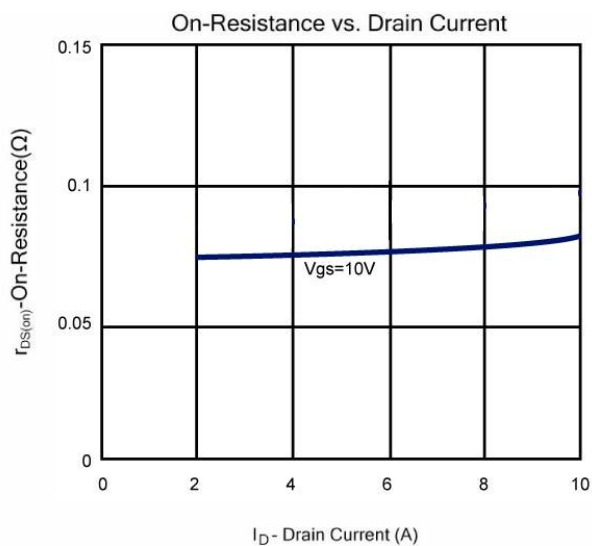
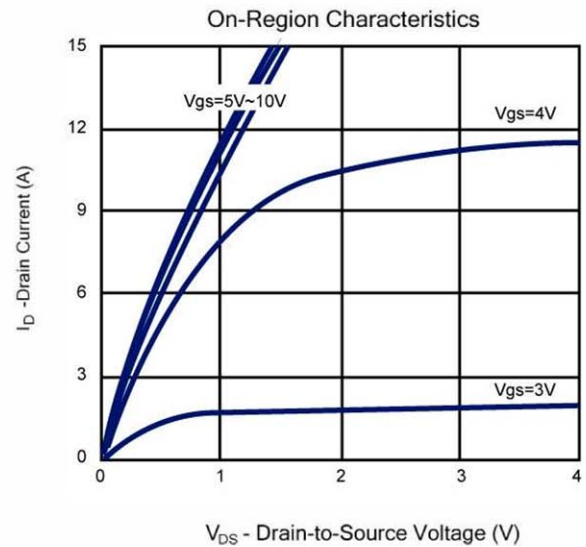
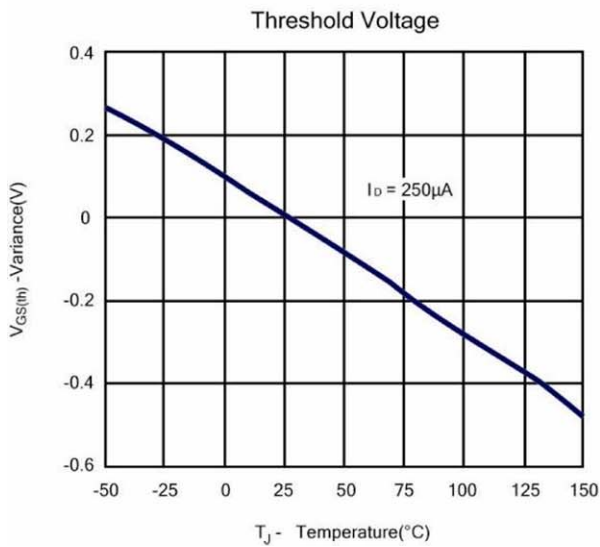
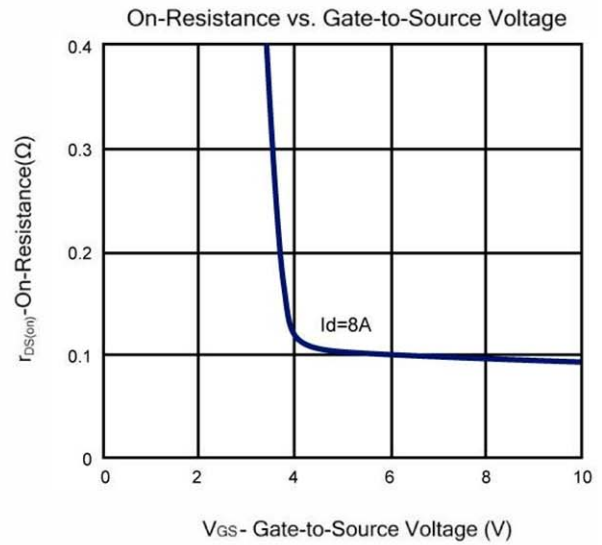
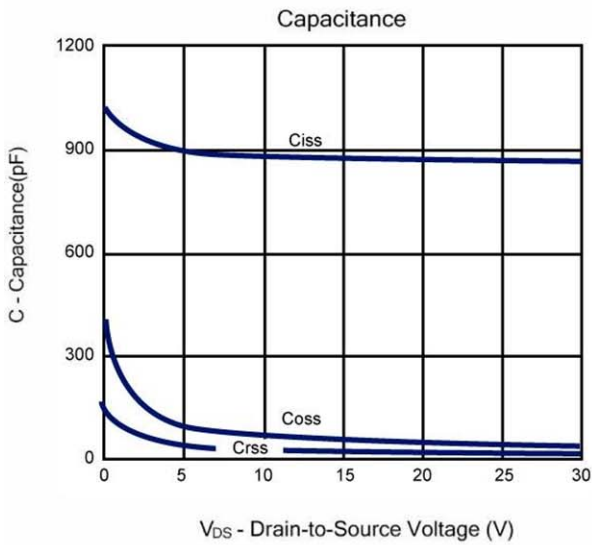
Notes: a. Based on epoxy or solder paste and bond wire Al wire 10mil×2(S), Au or Cu wire 1.5mil×1(G) on each die of To-252 package.

b. Pulse test; pulse width ≤ 300us, duty cycle ≤ 2%.

c. Force mos reserves the right to improve product design, functions and reliability without notice.

N-Channel 100V (D-S) MOSFET

Typical Characteristics (T_J =25°C Noted)



N-Channel 100V (D-S) MOSFET

Typical Characteristics (T_J = 25°C Noted)

