

SOT-23 Plastic-Encapsulate MOSFETS

Features

- VDS=30V
- ID=0.1A
- RDS(on)@VGS=4V < 8Ω
- RDS(on)@VGS=2.5V < 13Ω
- Trench Power LV MOSFET technology
- High density cell design for low RDS(ON)
- High Speed switching

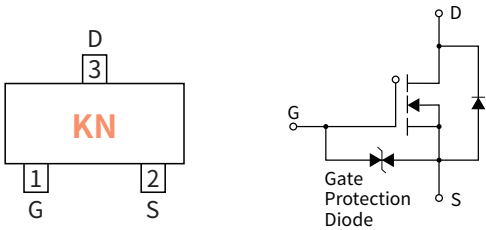
Applications

- Interfacing
- Load switch

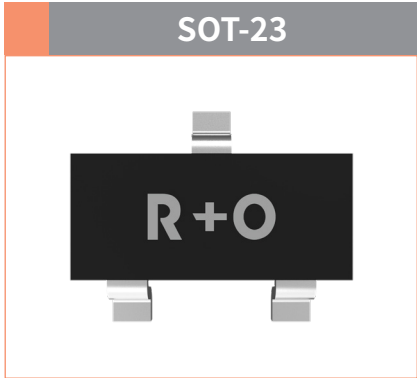
Mechanical Data

- Case: SOT-23
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant,halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026

Function Diagram



Drain-source Voltage
30 V
Drain Current
0.1 Ampere



Maximum Ratings (Ta=25°C Unless otherwise specified)

Table with 4 columns: PARAMETER, SYMBOL, UNIT, and VALUE. It lists various electrical and thermal ratings for the MOSFET, such as Drain-source Voltage (30V), Gate-source Voltage (±20V), Drain Current (0.1A), and Thermal Resistance (357°C/W).

Ordering Information

Table with 7 columns: PACKAGE, PACKAGE CODE, UNIT WEIGHT(g), REEL(pcs), BOX(pcs), CARTON(pcs), and DELIVERY MODE. It provides ordering details for the SOT-23 package, including a unit weight of 0.008g and a delivery mode of 7 inches.

● Static Parameter Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	Condition	UNIT	Min	Typ	Max
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=250\mu A$	V	30	—	—
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30V, V_{GS}=0V$	μA	—	—	1.0
Gate-Body Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$	μA	—	—	± 1.0
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=3.0V, I_D=0.1mA$	V	0.8	—	1.5
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=4.0V, I_D=10mA$	Ω	—	—	8.0
		$V_{GS}=2.5V, I_D=1.0mA$		—	—	13
Forward Transconductance	g_{FS}	$V_{DS}=3.0V, I_D=10mA$	mS	20	—	—

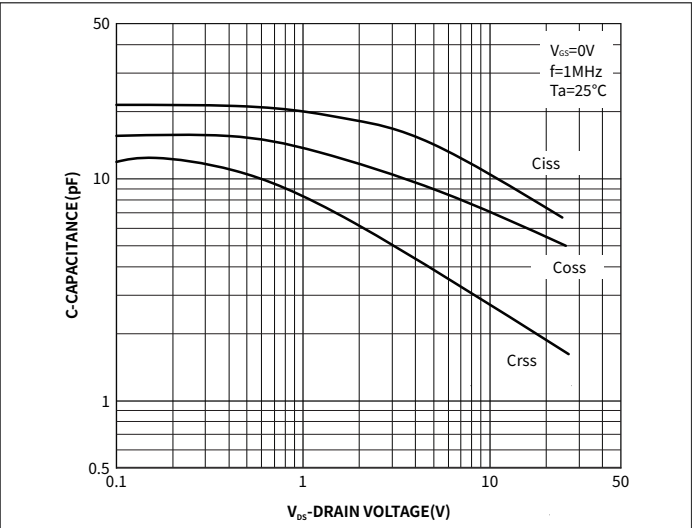
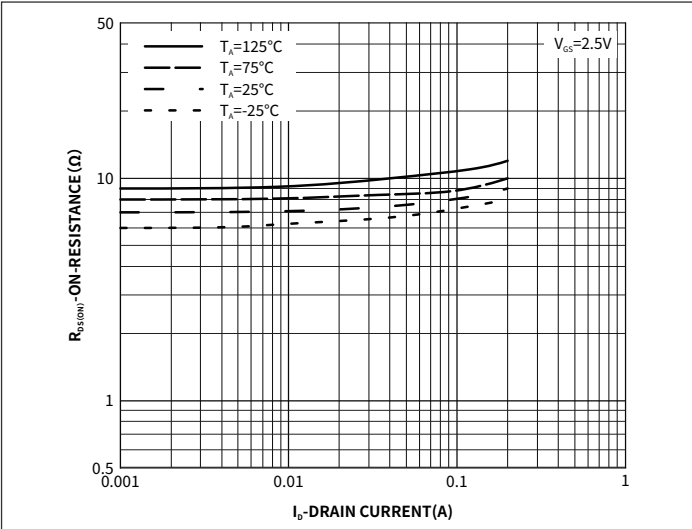
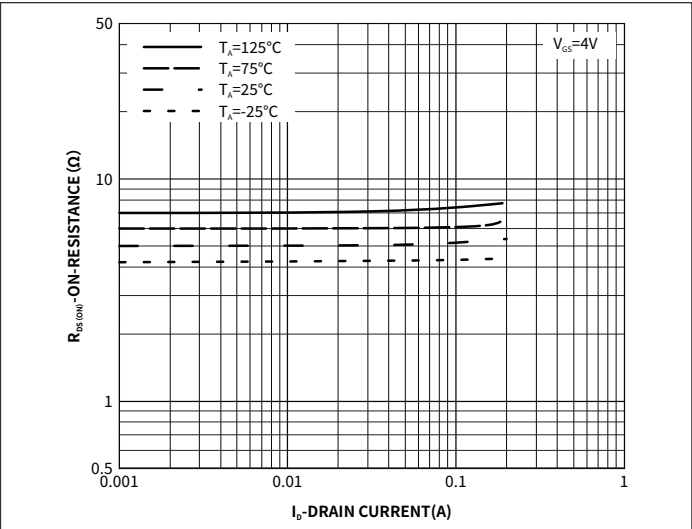
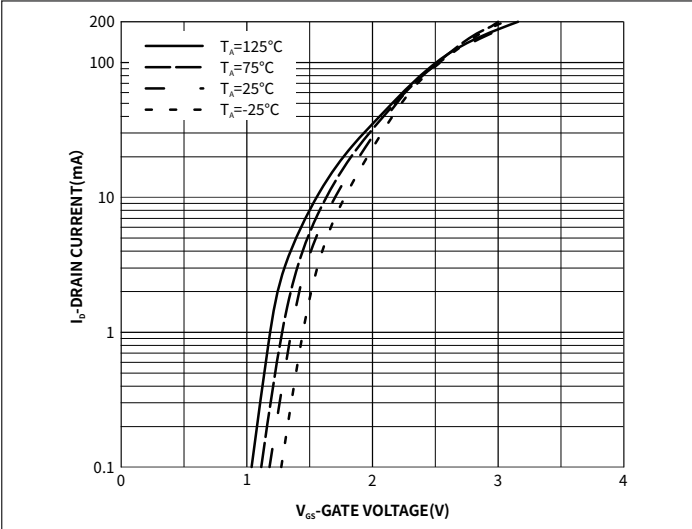
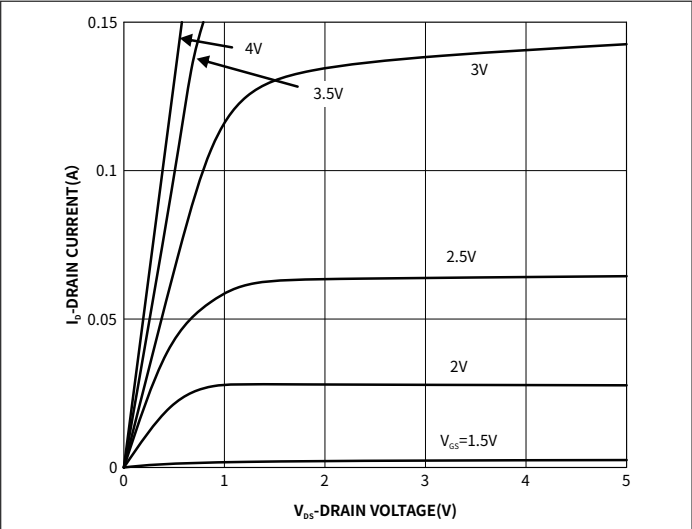
● Dynamic Parameters (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	Condition	UNIT	Min	Typ	Max
Input Capacitance	C_{iss}	$V_{DS}=5.0V, V_{GS}=0V, f=1MHz$	pF	—	13	—
Output Capacitance	C_{oss}			—	9.0	—
Reverse Transfer Capacitance	C_{rss}			—	4.0	—

● Switching Parameters (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	Condition	UNIT	Min	Typ	Max
Turn-on Delay Time	$t_{D(on)}$	$V_{GS}=5.0V, V_{DS}=5.0V, I_D=10mA, R_{GEN}=10\Omega, R_L=500\Omega$	ns	—	15	—
Turn-on Rise Time	t_r			—	35	—
Turn-off Delay Time	$t_{D(off)}$			—	80	—
Turn-off fall Time	t_f			—	80	—

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



Ordering Information

Table with 7 columns: PACKAGE, PACKAGE CODE, UNIT WEIGHT(g), REEL(pcs), BOX(pcs), CARTON(pcs), DELIVERY MODE. Row 1: SOT-23, R1, 0.008, 3000, 45000, 180000, 7"

Package Outline Dimensions (SOT-23)

Diagram of SOT-23 package dimensions and a table of dimension values.

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.15	0.035	0.045
A1	-	0.10	-	0.004
A2	0.90	1.05	0.035	0.041
b	0.30	0.50	0.012	0.020
c	0.10	0.20	0.004	0.008
D	2.80	3.00	0.110	0.118
E	1.20	1.40	0.047	0.055
E1	2.25	2.55	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.80	2.00	0.071	0.079
L	0.550REF		0.022REF	
L1	0.30	0.50	0.012	0.020
θ	-	8°	-	8°

Suggested Pad Layout

Diagram of suggested pad layout dimensions and a table of dimension values.

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.75	0.85	0.030	0.033
K	0.85	0.95	0.33	0.037
M	1.95	2.05	0.077	0.081
N	1.85	1.95	0.073	0.077