

**Description**

This 30V 100mA N-Channel MOSFET in a SOT-323 Plastic Package.

**Applications**

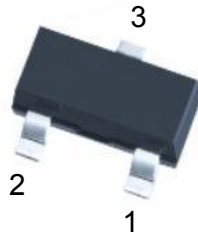
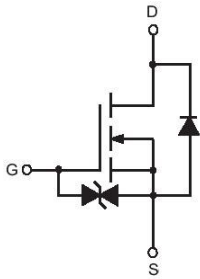
Interfacing, switching

**Features**

- Low on-resistance
- Fast switching speed.
- Low voltage drive
- Easily designed drive circuits
- Easy to parallel
- Halogen-Free Product.

$V_{DSS}$	$R_{DS(on)}$ Typ	$I_D$
30V	5Ω	100mA

**Equivalent Circuit & Pinning**



PIN1 : Gate

PIN 2 : Source

PIN 3 : Drain

**Absolute Maximum Ratings(Ta=25°C)**

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DSS}$	30	V
Gate-Source Voltage	$V_{GSS}$	$\pm 20$	V
Drain Current – Continuous	$I_D$	100	mA
Drain Current– Pulsed	$I_{DP}^{*1}$	200	mA
Reverse drain current–Continuous	$I_{DR}$	100	mA
Reverse drain current– Pulsed	$I_{DRP}^{*1}$	200	mA
Total power dissipation ( $T_c=25^\circ\text{C}$ )	$P_D^{*2}$	200	mW
Channel Temperature	$T_{ch}$	150	V
Storage Temperature Range	$T_{stg}$	-55~150	°C

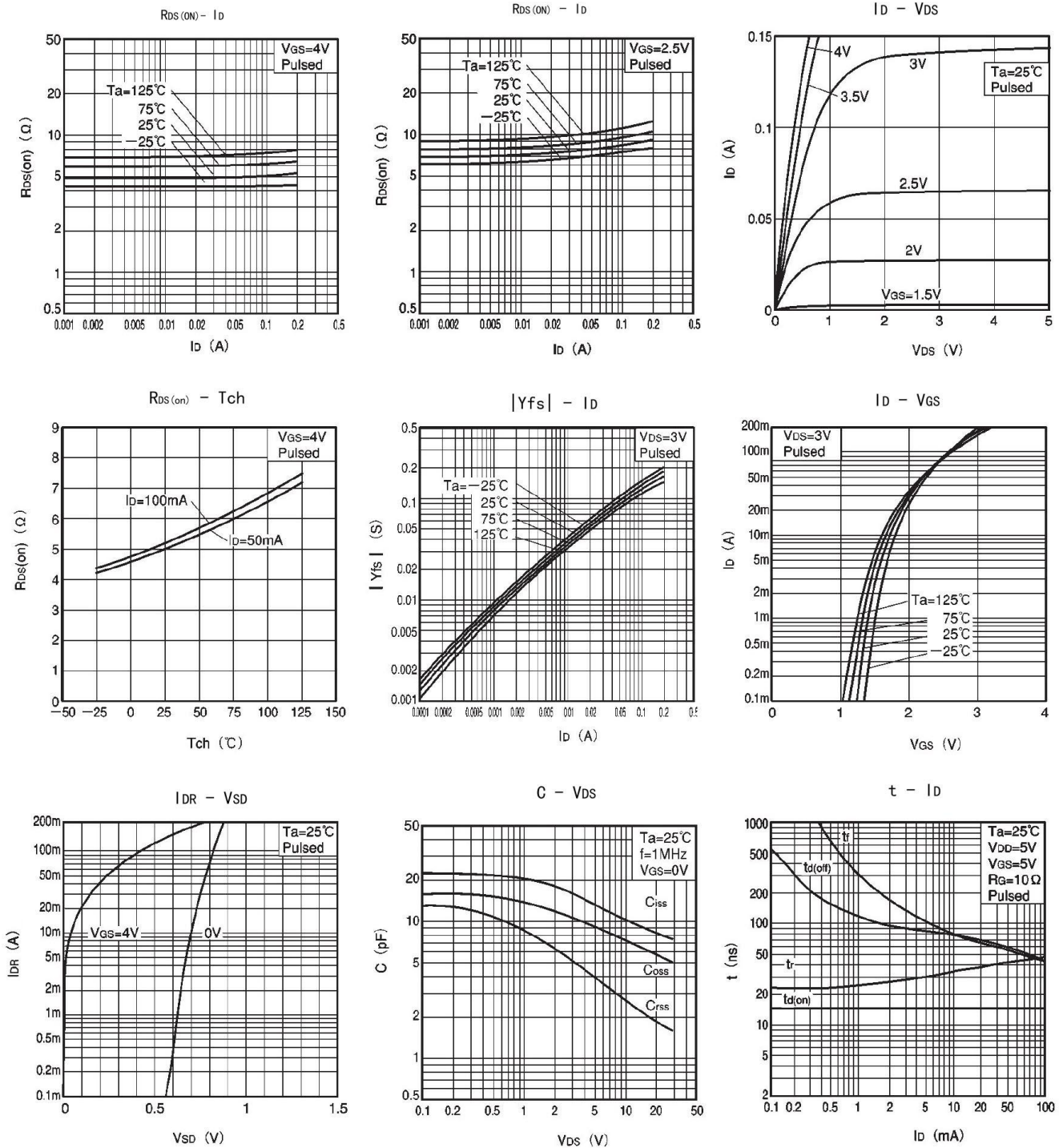
 1: $P_w \leq 10\mu\text{s}$ , Duty cycle  $\leq 50\%$ 

2:With each pin mounted on the recommended lands

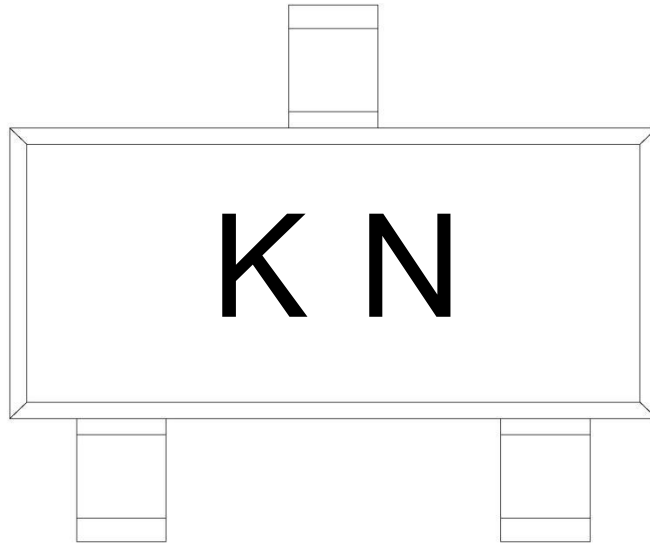
**Electrical Characteristics(Ta=25°C)**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V$ $I_D=10\mu A$	30			V	
Gate threshold voltage	$V_{GS(th)}$	$V_{DS}=3.0V$ $I_D=100\mu A$	0.8		1.5	V	
Static Drain–Source On–Resistance	$R_{DS(on)1}$	$V_{GS}=4.0V$ $I_D=10mA$		5.0	8.0	$\Omega$	
	$R_{DS(on)2}$	$V_{GS}=2.5V$ $I_D=1.0mA$		7.0	13	$\Omega$	
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=30V$ $V_{GS}=0V$			1.0	$\mu A$	
Gate–Body Leakage.	$I_{GSS}$	$V_{GS}=\pm 20V$ $V_{DS}=0V$			$\pm 1$	$\mu A$	
Forward Transconductance	$g_{FS}$	$V_{DS}=3V$ $I_D=10mA$	20			mS	
Input Capacitance	$C_{iss}$	$V_{DS}=5.0V$ $V_{GS}=0V$ $f=1.0MHz$		13		pF	
Output Capacitance	$C_{oss}$				9.0		pF
Reverse Transfer Capacitance	$C_{rss}$				4.0		pF
Turn–On Delay Time	$t_{d(on)}$	$I_D=10mA$ $V_{DD}\approx 5.0V$ $V_{GS}=5.0V$ $R_L=500\Omega$ $R_{GS}=10\Omega$		15		ns	
Turn–On Rise Time	$t_r$			35		ns	
Turn–Off Delay Time	$t_{d(off)}$				80		ns
Turn–Off Fall Time	$t_f$				80		ns

Electrical Characteristic Curve



Marking Instructions



Note:

KL: Package Type

Packaging SPEC.

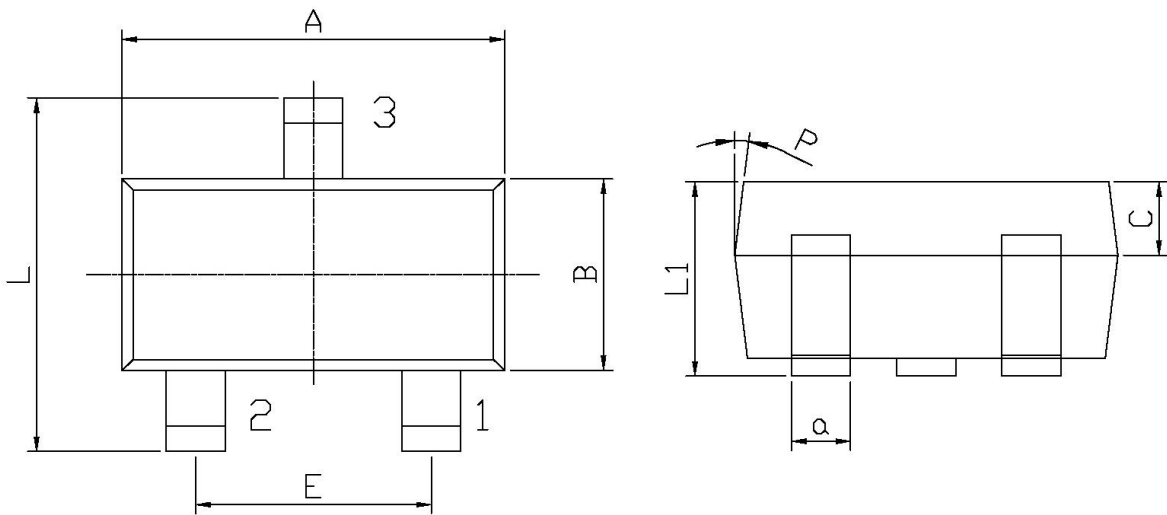
REEL INFORMATION

Package Type	Units					Dimension (unit: mm <sup>3</sup> )		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT-323	3,000	10	30,000	6	180,000	7" ×8	180×120×180	390×385×205

Package Outline Dimensions

SOT-323

单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	1.95	2.35	C	0.30	0.50
L	2.00	2.2	L1	0.85	1.15
E	1.20	1.40	a	0.20	0.40
B	1.15	1.35	P	7°	