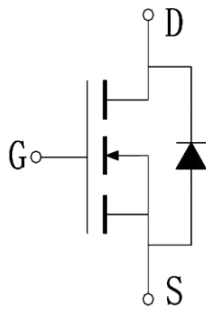




V _{DS}	R _{DS(on)} Typ.	I _D Max.
30V	21mΩ @ 10V	7A
	23mΩ @ 4.5V	
	28mΩ @ 2.5V	



Schematic Diagram

1.Features

- ◆ 30V MOSFET technology
- ◆ Low on-state resistance
- ◆ Fast switching
- ◆ V_{GS}±12V

2.Applications

- ◆ Power Switching Applicat
- ◆ Load Switching



SOT23-3

Pin Description

3.Package Marking and Ordering Information

Part no.	Marking	Package	PCS/Reel	PCS/CTN.
JX3400AS3	3400	SOT23-3	3,000	120,000

4.Absolute Max Ratings at Ta=25°C (Note1)

Parameter	Symbol	Maximum	Units
Drain to Source Voltage	V _{DSS}	30	V
Gate to Source Voltage	V _{GSS}	±12	V
Drain Current (DC)	I _D	7	A
Drain Current (Pulse), PW≤300μs	I _{DP}	23	A
Total Dissipation	P _D	1.36	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

Note 1: Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.



5. Thermal Resistance Ratings

Parameter	Symbol	Value	Unit
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	92	$^{\circ}C/W$

Note 2: When mounted on 1 inch square copper board $t \leq 10\text{sec}$ The value in any given application depends on the user's specific board design.

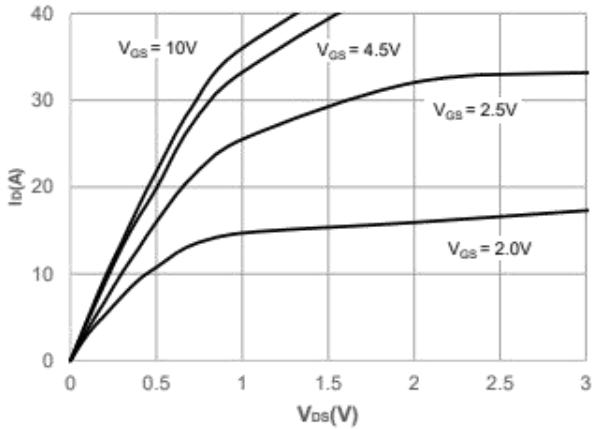
6. Electrical Characteristics at $T_a=25^{\circ}C$ (Note 3)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 250\mu A, V_{GS} = 0V$	30	33		V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 30V, V_{GS} = 0V$			1	μA
Gate to Source Leakage Current	I_{GSS}	$V_{GS} = \pm 12V, V_{DS} = 0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_{DS}=250\mu A$	0.5	1.0	1.5	V
Static Drain to Source On-State Resistance	$R_{DS(on)}$	$I_D = 4.2A, V_{GS} = 10V$	-	21	26	m Ω
		$I_D = 4A, V_{GS} = 4.5V$	-	23	28	m Ω
		$I_D = 1, V_{GS} = 2.5V$	-	28	40	m Ω
Input Capacitance	C_{iss}	$V_{GS}=0V,$ $V_{DS}=15V,$ Frequency=1.0MHz		785		pF
Output Capacitance	C_{oss}			66		pF
Reverse Transfer Capacitance	C_{rss}			54		pF
Turn-ON Delay Time	$t_{d(on)}$			4		ns
Rise Time	t_r	$V_{DS} = 15V, I_D=3A$ $V_{GS} = 10V, R_G = 3\Omega$		11		ns
Turn-OFF Delay Time	$t_{d(off)}$			24		ns
Fall Time	t_f			2		ns
Total Gate Charge	Q_g	$V_{DS} = 15V,$ $V_{GS} = 10V,$ $I_D = 3A$		19		nC
	Q_{gs}			2		nC
	Q_{gd}			2.1		nC
Diode Forward Voltage	V_{FSD}	$I_S = 7A, V_{GS} = 0$		0.9	1.2	V

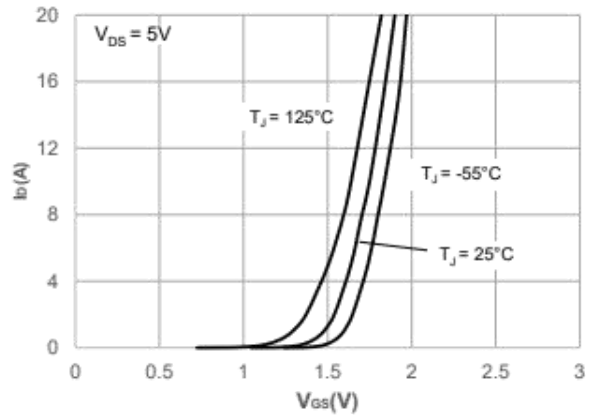
Note 3: Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.



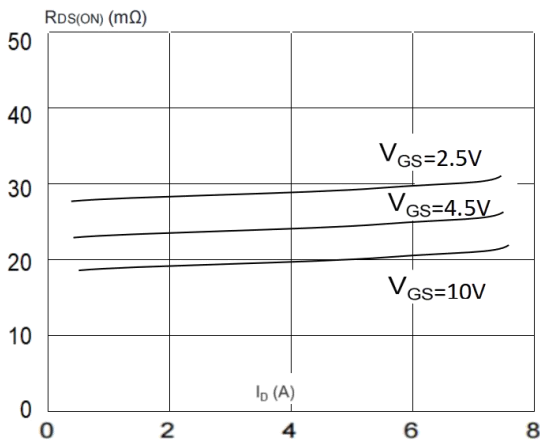
7. Typical electrical and thermal characteristics



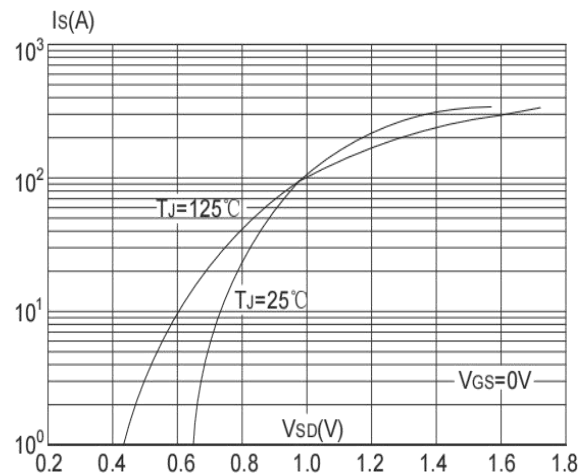
Output Characteristics



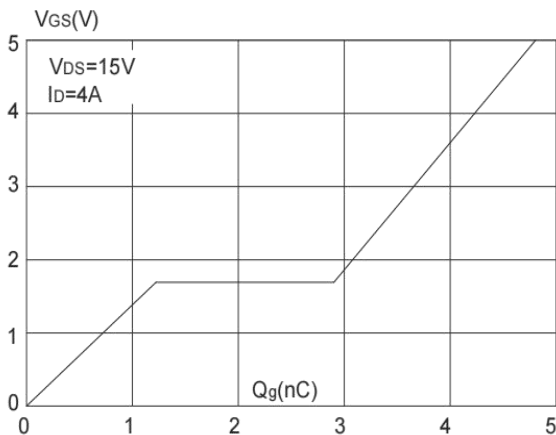
Typical Transfer Characteristics



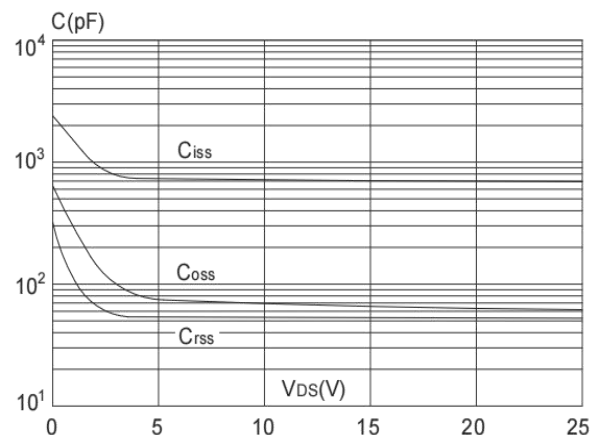
On-resistance vs . Drain Current



Body Diode Characteristics



Gate Charge Characteristics

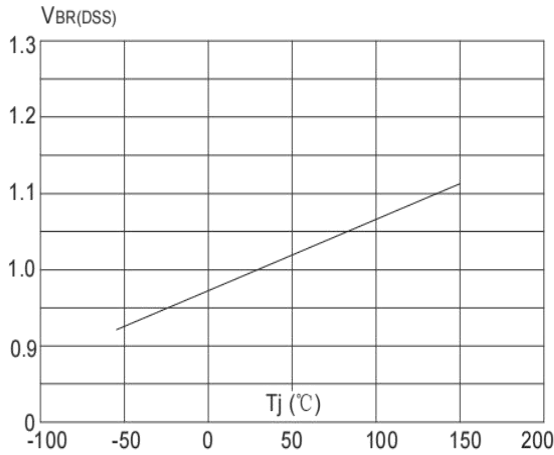


Capacitance Characteristics

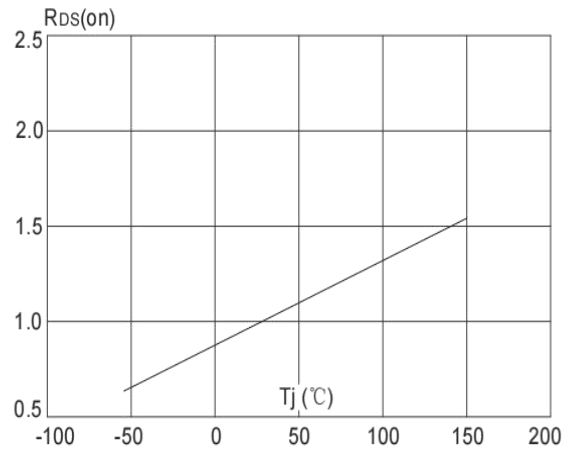


JX3400AS3

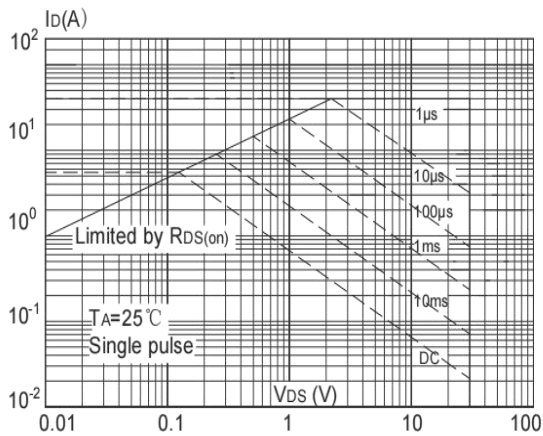
N-Channel Enhancement Mode MOSFET



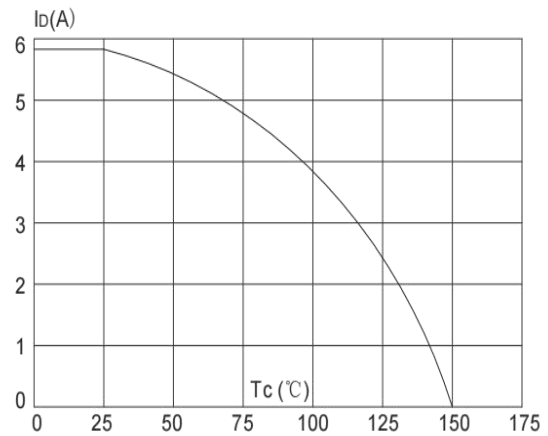
**Normalized Breakdown Voltage vs .
Junction Temperature**



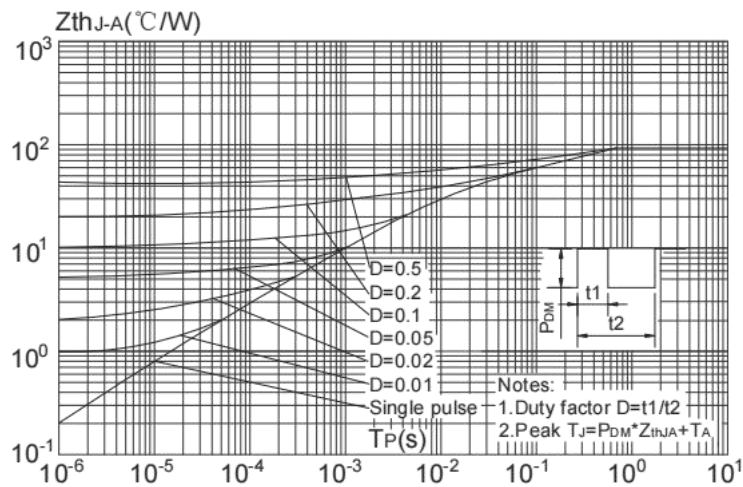
**Normalized on Resistance vs .
Junction Temperature**



Maximum Safe Operating Area



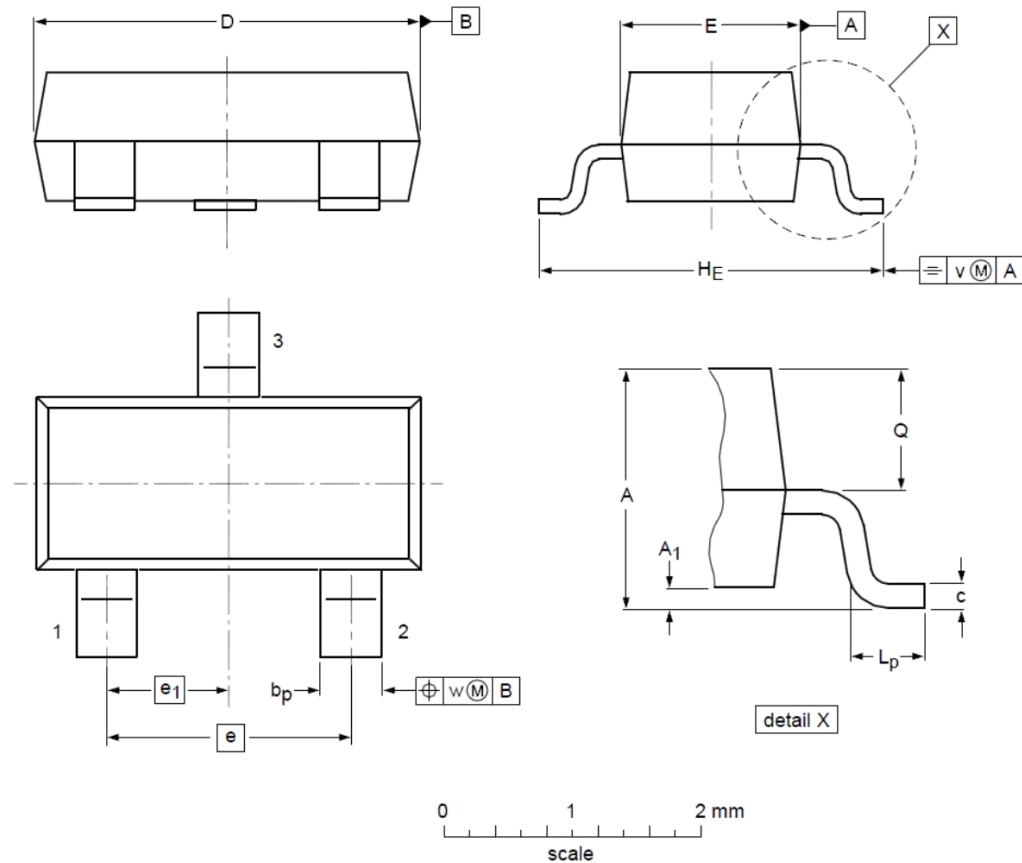
**Maximum Continuous Drain Current vs.
Case Temperature**



**Maximum Effective Transient Thermal
Impedance, Junction-to-Ambient**



8.Package Dimensions



DIMENSIONS (unit : mm)

Symbol	Min	Typ	Max	Symbol	Min	Typ	Max
A	1.00	1.17	1.30	A₁	0.01	0.05	0.10
b_p	0.35	0.39	0.50	c	0.10	0.20	0.26
D	2.70	2.90	3.10	E	1.30	1.58	1.70
e	--	1.90	--	e₁	--	0.95	--
H_E	2.50	2.78	3.00	L_p	0.20	0.32	0.60
Q	0.23	0.27	0.33	v	--	0.20	--
w	--	0.20	--				