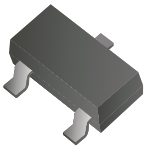
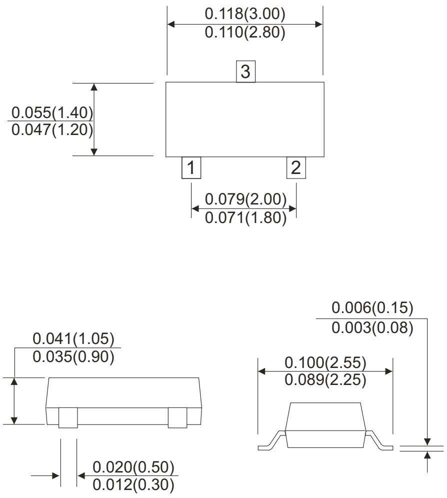
CJ3400-HF (N-Channel)

Reverse Voltage: 30 Volts
Forward Current: 5.8 A
RoHS Device
Halogen Free



SOT-23



Dimensions in inches and (millimeter)

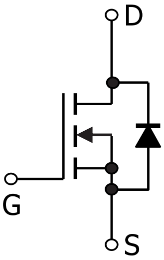
Features

- N-Channel Enhancement mode field effect transistor.
- High dense cell design for extermely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability.

Mechanical data

- Case: SOT-23, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.

Circuit diagram



Maximum Ratings (Ta=25 °C unless otherwise noted)

Parameter	Symbol	Value	Units
Drain-source voltage	V_{DS}	30	V
Gate-source voltage	V_{GS}	±12	V
Continuous drain current	I_D	5.8	A
Drain current-pulsed (note 1)	I_{DM}	30	A
Power dissipation	P_D	350	mW
Thermal resistance from Junction to ambient (note 2)	$R_{\Theta JA}$	357	°C/W
Junction temperature	T_J	150	°C
Storage temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics (Ta=25 °C unless otherwise noted)

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Off Characteristics						
Drain-Source breakdown voltage	V_{GS}=0V, I_D=250μA	$V_{(BR)DSS}$	30			V
Zero gate voltage drain current	V_{DS}=24V, V_{GS}=0V	I_{DSS}			1	μA
Gate-Source leakage current	V_{GS}=±12V , V_{DS}=0V	I_{GSS}			±100	nA
On Characteristics						
Static drain-source on-resistance (note 3)	V_{GS}=10V, I_D=5.8A	$R_{DS(ON)}$			35	mΩ
	V_{GS}=4.5V, I_D=5A				40	
	V_{GS}=2.5V, I_D=4A				52	
Forward transconductance	V_{DS}=5V, I_D=5A	g_{FS}	8			S
Gate threshold voltage	V_{DS}=V_{GS}, I_D=250μA	$V_{GS(th)}$	0.7		1.4	V
Dynamic Characteristics (note 3,4)						
Input capacitance	V_{DS}=15V, V_{GS}=0V, f=1MHz	C_{iss}			1050	pF
Output capacitance		C_{oss}		99		
Reverse transfer capacitance		C_{rss}		77		
Gate resistance	V_{DS}=0V, V_{GS}=0V, f=1MHz	R_g			3.6	Ω
Switching Characteristics (note 3,4)						
Turn-on delay time	V_{GS}=10V, V_{DS}=15V, R_L=2.7Ω, R_{GEN}=3Ω	$t_{d(on)}$			5	ns
Turn-on rise time		t_r			7	
Turn-off delay time		$t_{d(off)}$			40	
Turn-off Fall time		t_f			6	
Drain-source diode characteristics and maximum ratings						
Diode forward voltage (note 3)	I_S=1A, V_{GS}=0V	V_{SD}			1	V

Note:

1. Repetitive Rating : Pulse width limited by maximum junction temperature.
2. Surface mounted on FR4 Board, t < 5sec.
3. Pulse test; Pulse width ≤300μs, Duty cycle ≤ 2%.
4. Guaranteed by design, not subject to production testing.

RATING AND CHARACTERISTIC CURVES (CJ3400-HF)

Fig.1- Output Characteristics

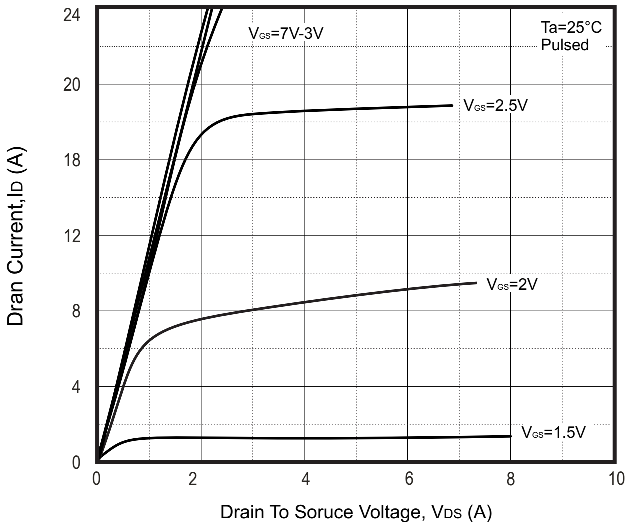


Fig.2- Transfer Characteristics

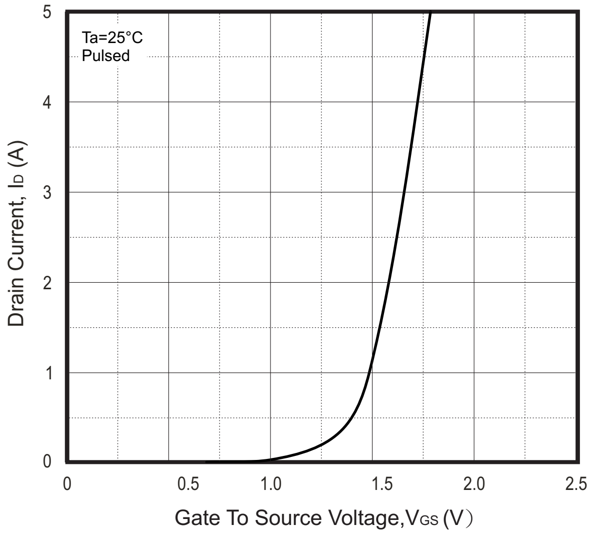


Fig.3 - $R_{DS(ON)}$ — I_D

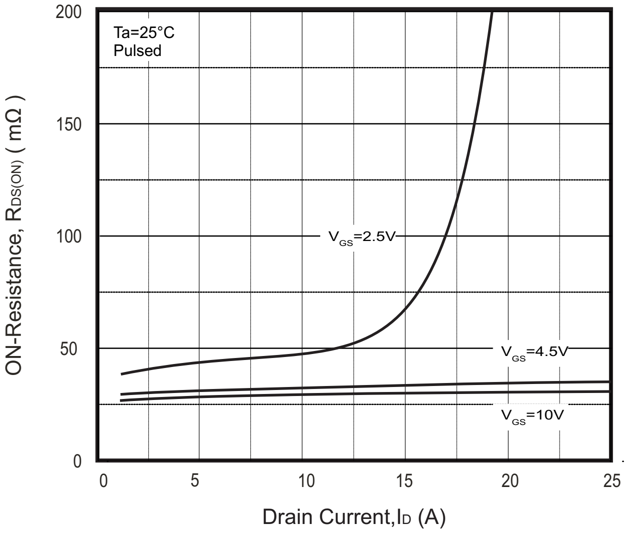


Fig.4- $R_{DS(ON)}$ — V_{GS}

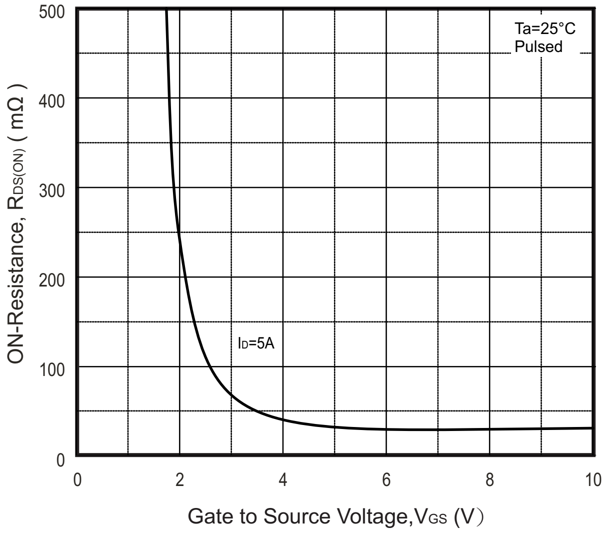
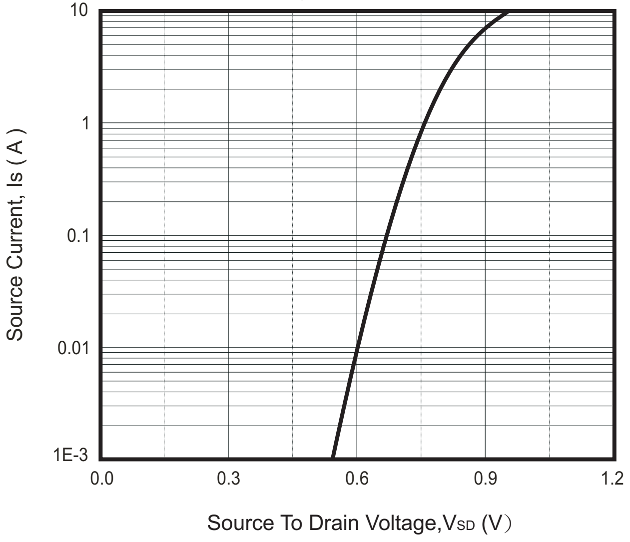
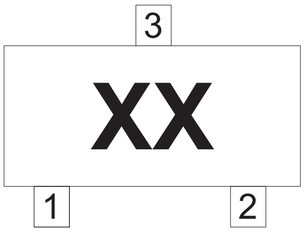


Fig.5 - I_S — V_{SD}



Marking Code

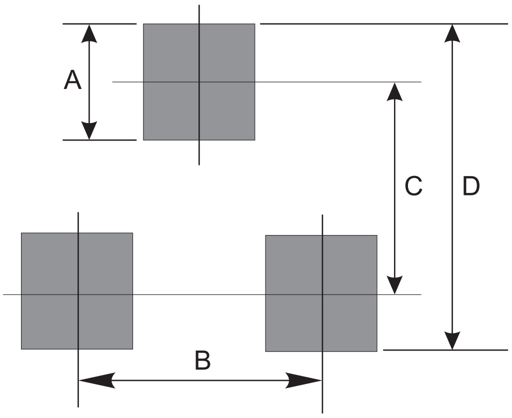
Part Number	Marking Code
CJ3400-HF	R0



xx = Product type marking code

Suggested PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.80	0.031
B	1.90	0.075
C	2.02	0.080
D	2.82	0.111



Standard Packaging

Case Type	Qty Per Reel	Reel Size
	(Pcs)	(inch)
SOT-23	3,000	7