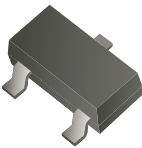


CJ3404-HF

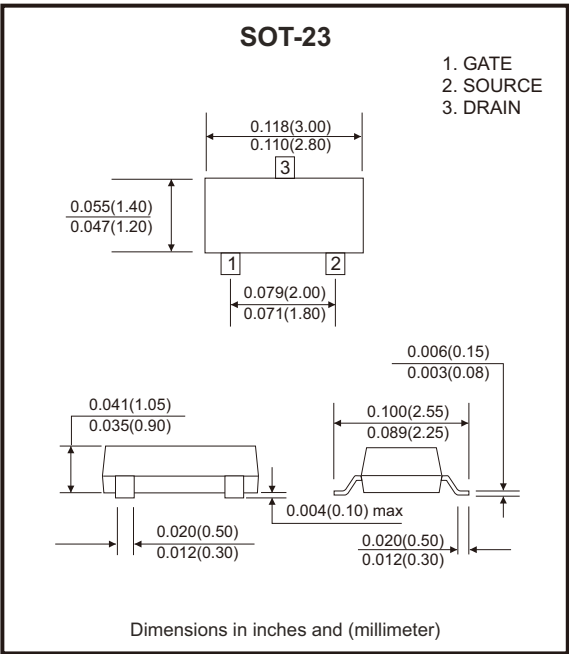
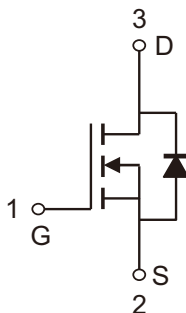
N-Channel
RoHS Device
Halogen Free



Mechanical Data

- Case: SOT-23, molded plastic.
- Mounting position: Any.

Circuit Diagram



$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
30V	30m Ω @ 10V	5.8A
	42m Ω @ 4.5V	

Maximum Ratings and Electrical Characteristics

(at $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Units
Drain-source voltage	V_{DS}	30	V
Gate-source voltage	V_{GS}	± 20	V
Continuous drain current	I_D	5.8	A
Pulsed drain current (Note 1)	I_{DM}	30	A
Power dissipation	P_D	350	mW
Thermal resistance from junction to ambient ($t < 5s$)	$R_{\theta JA}$	357	$^\circ\text{C/W}$
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature	T_{STG}	-55 to +150	$^\circ\text{C}$

Notes: 1. Repetitive rating: Pulse width limited by maximum junction temperature.

Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameters						
Drain-source breakdown voltage	$V_{(BR) DSS}$	$V_{GS}=0V$, $I_D=250\mu A$	30			V
Zero gate voltage drain current	I_{DSS}	$V_{DS}=30V$, $V_{GS}=0V$			1	μA
Gate-body leakage current	I_{GSS}	$V_{DS}=0V$, $V_{GS}=\pm 20V$			± 100	nA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$, $I_D=250\mu A$	1	1.4	3	V
Drain-source on-resistance (Note 1)	$R_{DS(on)}$	$V_{GS}=10V$, $I_D=5.8A$		23	30	m Ω
		$V_{GS}=4.5V$, $I_D=4.8A$		31	42	
Forward transconductance (Note 1)	g_{FS}	$V_{DS}=5V$, $I_D=5.8A$	5			S
Diode forward voltage	V_{SD}	$I_S = 1A$			1	V
Dynamic Parameters (Note 2)						
Input capacitance	C_{iss}	$V_{DS}=15V$, $V_{GS}=0V$, $f=1MHz$			820	pF
Output capacitance	C_{oss}			118		
Reverse transfer capacitance	C_{rss}			85		
Gate resistance	G_g	$V_{DS}=0V$, $V_{GS}=0V$, $f=1MHz$			1.5	Ω
Switching Parameters (Note 2)						
Turn-on delay time	$t_{d(on)}$	$V_{GS}=10V$, $V_{DS}=15V$ $R_L=2.6\Omega$, $R_{GEN}=3\Omega$			6.5	nS
Rise time	t_r			3.1		
Turn-off delay time	$t_{d(off)}$			15.1		
Fall time	t_f			2.7		

Notes:

1. Pulse test: Pulse width $\leq 300\mu s$, Duty cycle $\leq 0.5\%$.
2. These parameters have no way to verify.

Rating and Characteristic Curves (CJ3404-HF)

Fig.1 - Output Characteristics

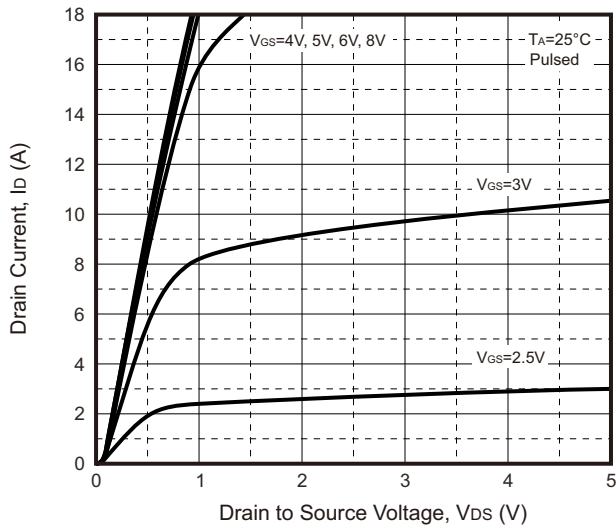


Fig.2 - Transfer Characteristics

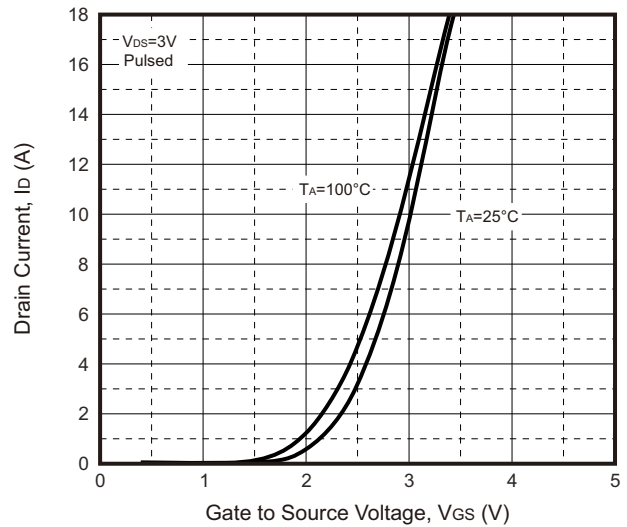


Fig.3 - $R_{DS(ON)}$ — I_D

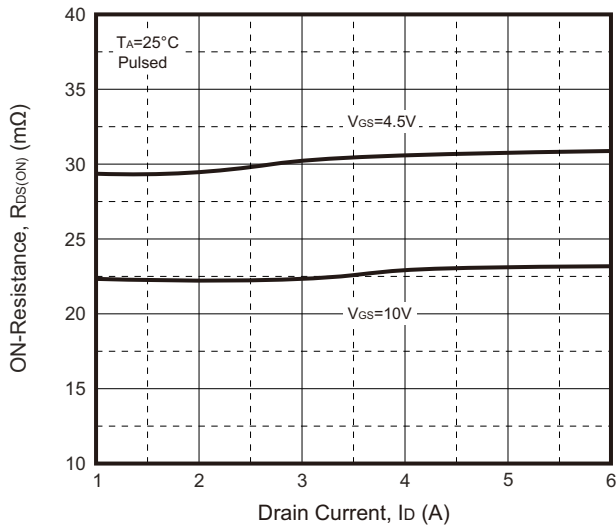


Fig.4 - $R_{DS(ON)}$ — V_{GS}

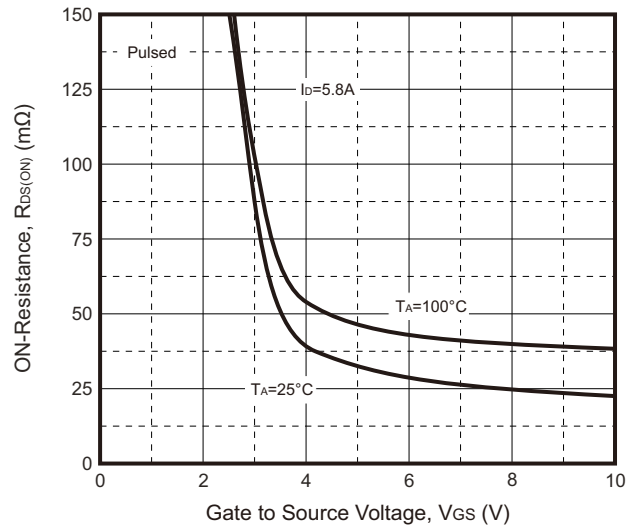


Fig.5 - I_S — V_{SD}

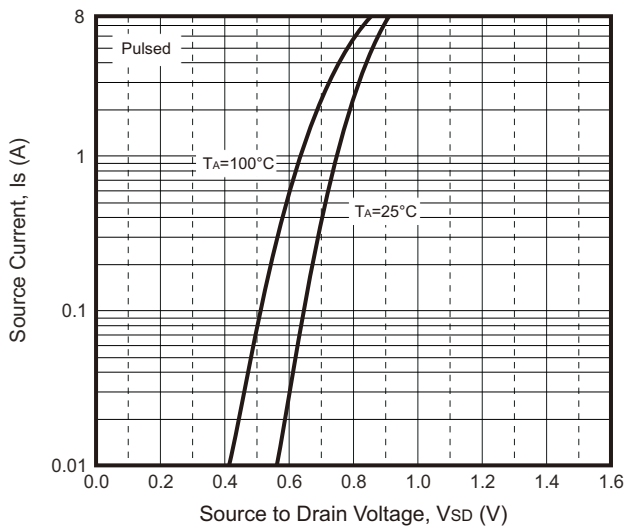
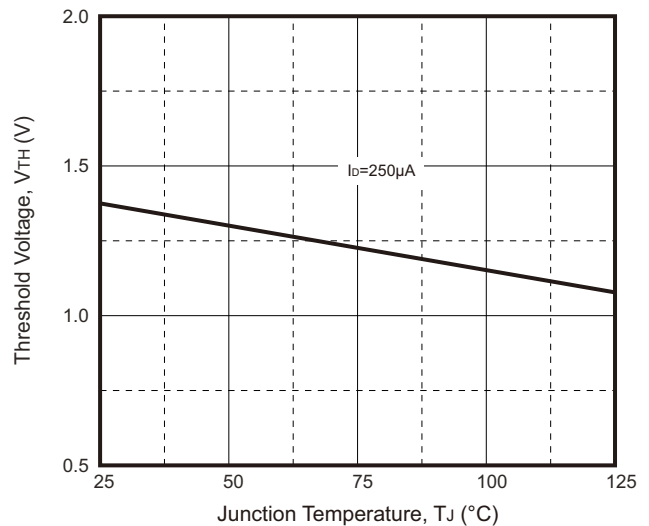
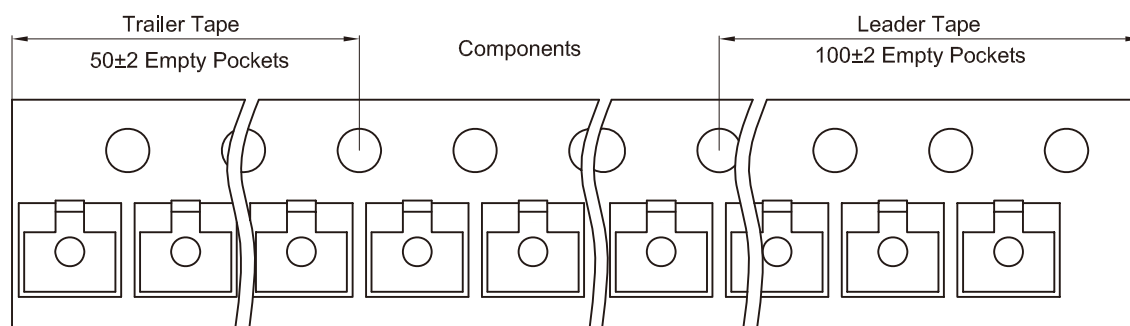
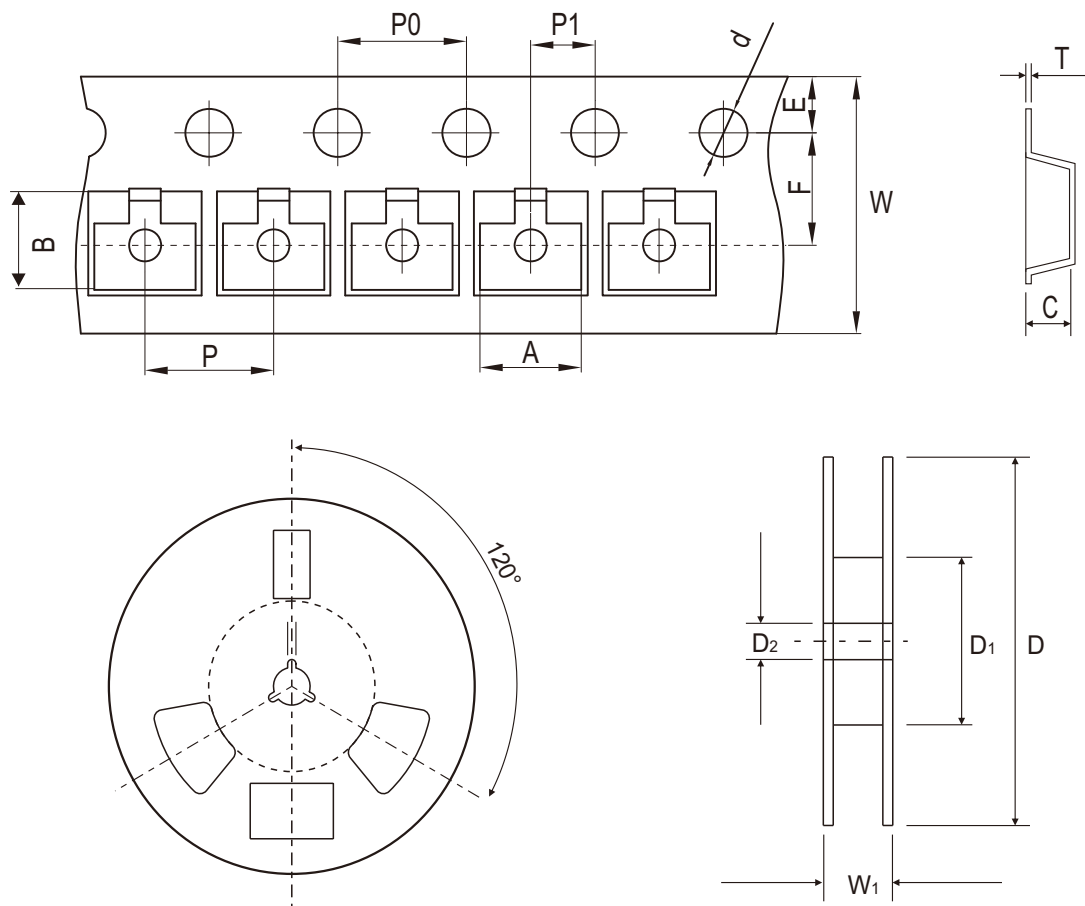


Fig.6 - Threshold Voltage



Reel Taping Specification

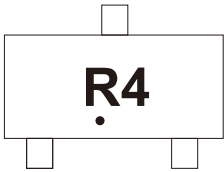


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.087 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

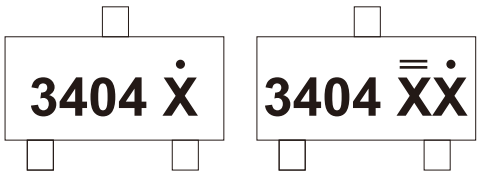
SOT-23	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	$8.00 + 0.30 / - 0.10$	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	$0.315 + 0.012 / - 0.004$	0.484 ± 0.039

Marking Code

Part Number	Marking Code	
	R4	3404
CJ3404-HF	R4	3404



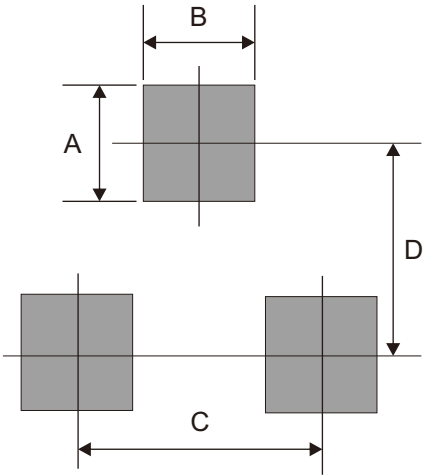
Solid dot = Control code



$\dot{X}$ / $\bar{\bar{X}}\dot{X}$ = Control code

Suggested P.C.B. PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.80	0.031
B	0.60	0.024
C	1.90	0.075
D	2.02	0.080



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-23	3,000	7