



HY3434

N-CHANNEL MOSFET

5A, 30V N-CHANNEL ENHANCEMENT MODE POWER MOSFET

■ FEATURE

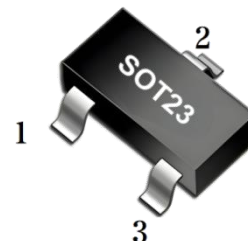
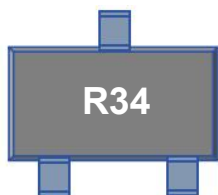
- * TrenchFET Power MOSFET
- * Low $R_{DS(ON)}$
- * Typical ESD Protection

■ APPLICATION

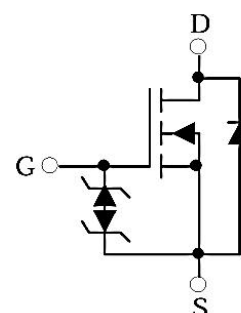
- * Ideal for Load Swith and Battery Protection Applications

■ MARKING

Type Code: Marking: R34



Equivalent Circuit



■ ABSOLUTE MAXIMUM RATINGS(TA=25°C, unless otherwise specified.)

SYMBOL	PARAMETER	VALUE	UNIT
V _{DS}	Drain-Source Voltage	30	V
V _{GS}	Gate- Source Voltage	±10	V
I _D	Continuous Drain Current	5	A
I _{DM} *	Pulsed Drain Current	20	A
P _D	Power Dissipation	0.3	W
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature	-55~150	°C
R _{θJA}	Thermal Resistance From Junction To Ambient	417	°C/W
T _L	Lead Temperature for Soldering Purposes(1/8" fromcase for 10s)	260	°C

Notes: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

* Repetitive rating: Pluse width limited by junction temperature.



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■ ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
STATIC CHARACTERISTICS						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =250μA	30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V, V _{GS} =0V			1	μA
Gate-body Leakage Current	I _{GSS}	V _{GS} =±10V, V _{DS} =0V			±10	μA
Gate threshold voltage(Note 1)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.6		1	V
Drain-source on- resistance(Note 1)	R _{DS(ON)}	V _{GS} =10V, I _D =5A		32.5	42	mΩ
		V _{GS} =4.5V,I _D =5A		35	44	
		V _{GS} =2.5V,I _D =4A		35	50	
Forward tranconductance(Note 1)	g _{FS}	V _{DS} =5V, I _D =4A		15		S
Diode forward voltage (note 1)	V _{SD}	V _{GS} =0V,I _S =1A			1	V
DYNAMIC CHARACTERISTICS(Note 2)						
Input Capacitance	C _{ISS}	V _{GS} =0V,V _{DS} =15V,f=1MHz		245		pF
Output Capacitance	C _{OSS}			35		
Reverse Transfer Capacitance	C _{RSS}			20		
SWICHING CHARACTERISTICS(Note 2)						
Turn-On Delay Time	td(on)	V _{DS} =15V, R _L =3.75Ω, V _{GS} =10V,R _{GEN} =3Ω		2		ns
Rise Time	tr			3.5		
Turn-Off Delay Time	td(off)			22		
Fall Time	tf			3.5		
Total Gate Charge	Qg	V _{DS} =15V,V _{GS} =10V,I _D =4A			10	nC
Gate-Source Charge	Qgs			0.5		
Gate-Drain Charge	Qgd			1		

Notes: 1. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 0.5\%$.

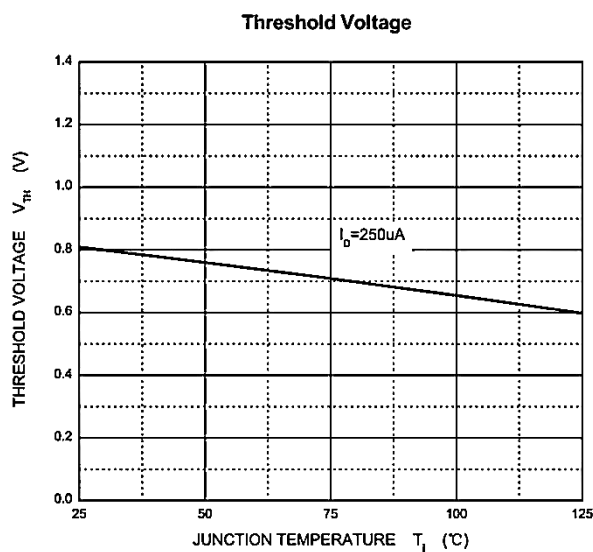
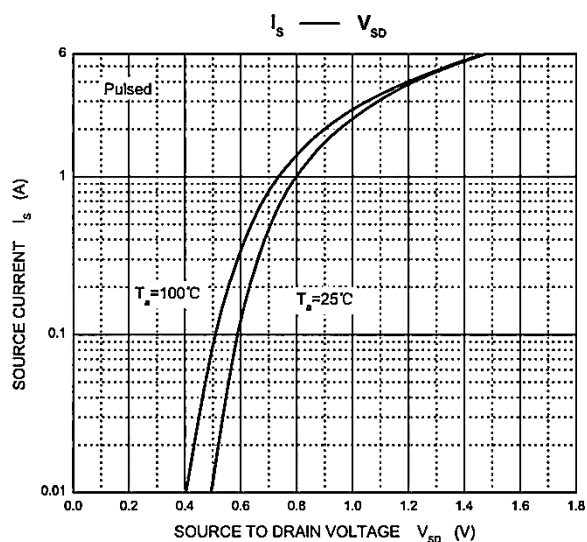
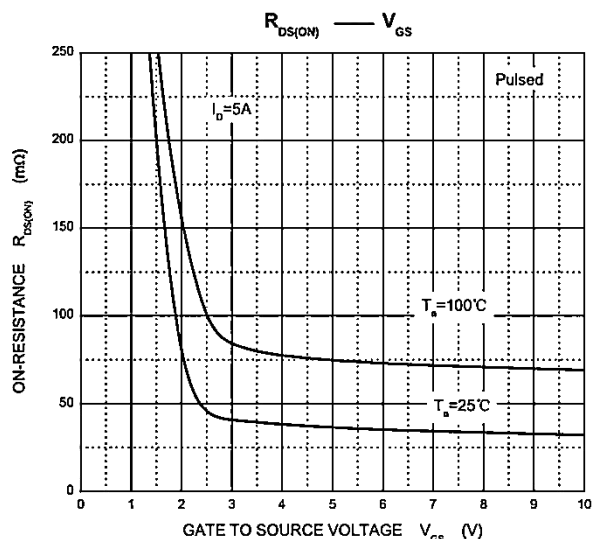
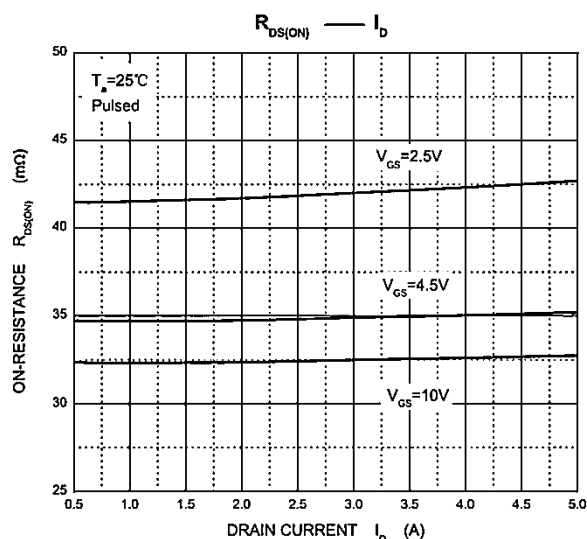
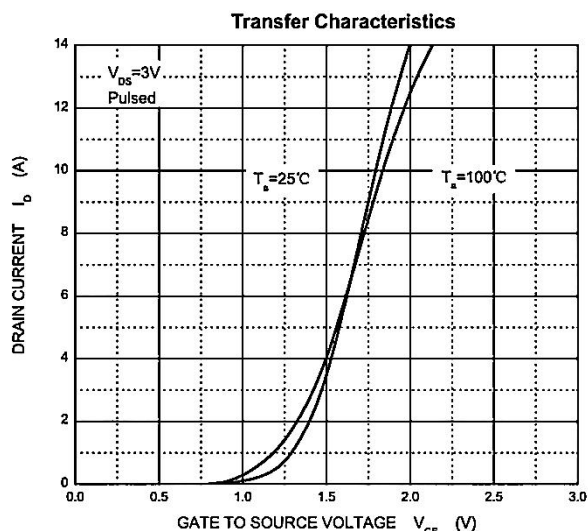
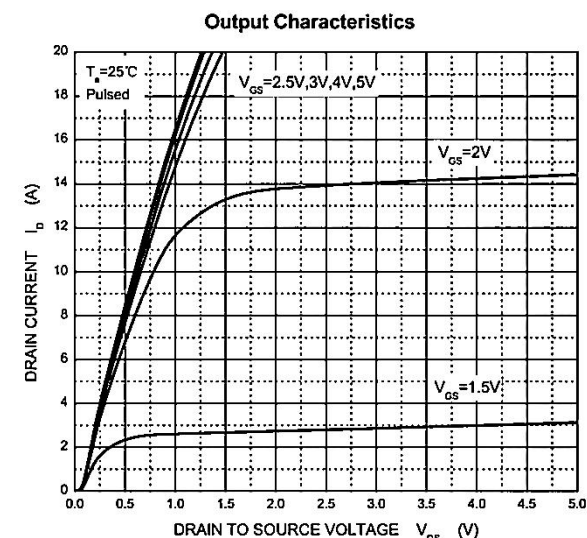
2. Guaranteed by design, not subject to production testing.



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TYPICAL CHARACTERISTICS

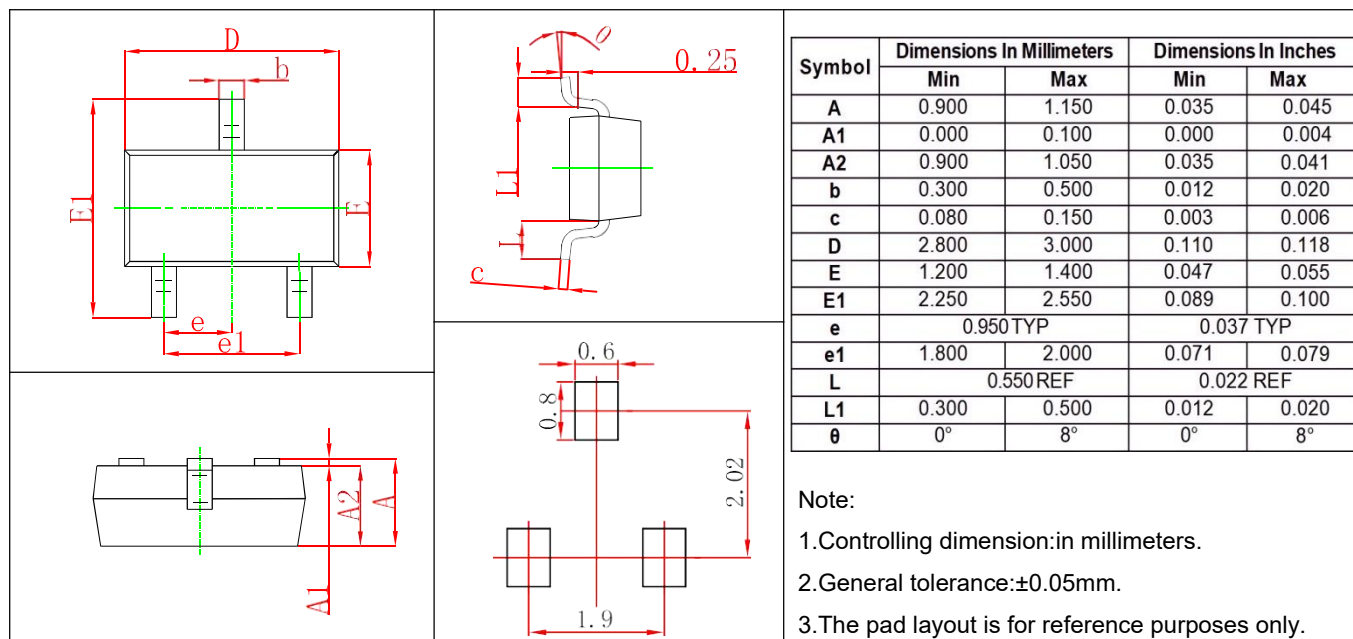




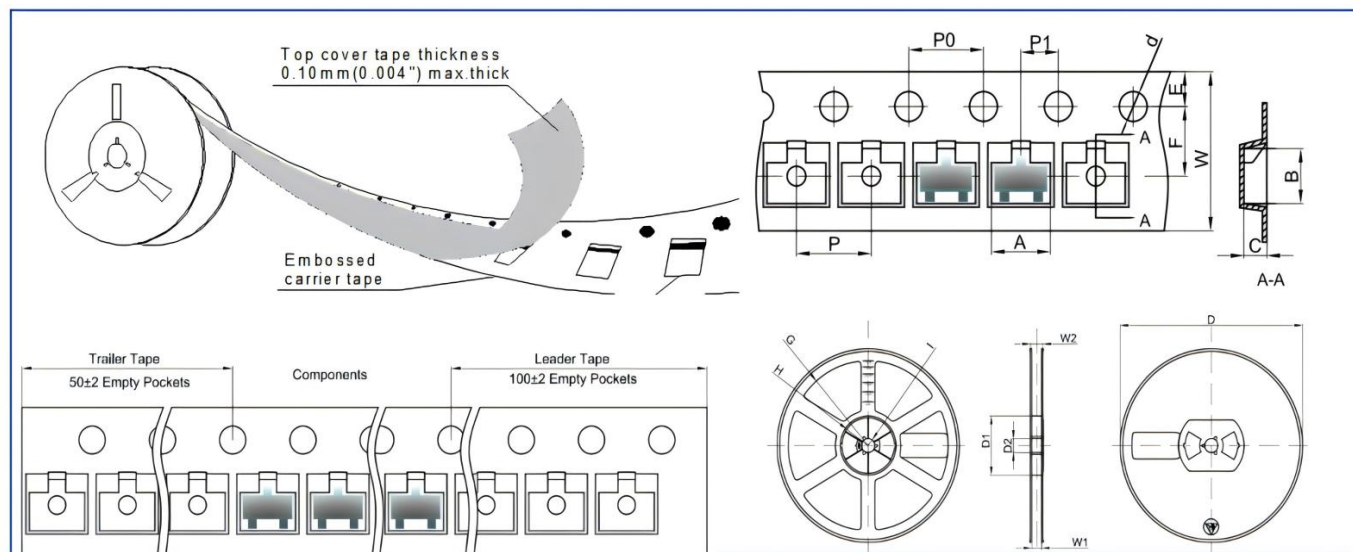
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■ SOT23 PACKAGE OUTLINE DIMENSIONS



■ REEL PACKING



Dimensions are in millimeter

PKG TYPE	A	B	C	d	E	F	Po	P	P1	W
SOT-23	3.15	2.77	1.22	Φ1.50	1.75	3.50	4.00	4.00	2.00	8.00
Reel Option	D	D1	D2	G	H	I	W1	W2	Q.TY PER REEL	
7" Dia	Φ178.0	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30	3000PCS	
13" Dia	Φ330.0	/	13.00	/	/	R6.50	9.50	12.30	10000PCS	