

版本	修订日期	有修订的页码	修订涉及的内容	拟制	审核
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/ Descriptions

SOT-89 塑封封装 N 沟道 MOS 场效应管。

N- CHANNEL MOSFET in a SOT-89 Plastic Package.

/ Features

$V_{DS} (V) = 100V$

$I_D = 4A (V_{GS} = 10V)$

$R_{DS(ON)} < 115m\Omega (V_{GS} = 10V)$

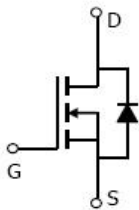
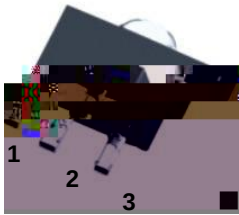
$R_{DS(ON)} < 150m\Omega (V_{GS} = 4.5V)$

无卤产品。HF Product.

/ Applications

适用于作负载开关或脉宽调制应用。

This device is suitable for use as a load switch or in PWM applications.

/ Equivalent Circuit**/ Pinning**

PIN1 : G

PIN 2 : D

PIN 3 : S

/ Marking

详见印章说明页。 See Marking Instructions.

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	100	V
Continuous Drain Current		I_D	4	A
Pulsed Drain Current		I_{DM}	16	A
Gate-Source Voltage		V_{GS}	± 20	V
Total Power Dissipation		P_D	2.0	W
Operating and Storage Junction Temperature Range		T_J, T_{STG}	-55 to 150	$^{\circ}\text{C}$
Maximum Junction-to-Ambient	$t \leq 10\text{s}$	$R_{\theta JA}$	62.5	$^{\circ}\text{C/W}$
Maximum Junction-to-Ambient	Steady-State		87	$^{\circ}\text{C/W}$
Maximum Junction-to-Lead	Steady-State	$R_{\theta JL}$	55.5	$^{\circ}\text{C/W}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0\text{V}$ $I_D=250\mu\text{A}$	100			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=100\text{V}$ $V_{GS}=0\text{V}$			1	μA
		$V_{DS}=100\text{V}$ $V_{GS}=0\text{V}$ $T_J=55^{\circ}\text{C}$			5	μA
Gate-Body Leakage.	I_{GSS}	$V_{GS}=\pm 20\text{V}$ $V_{DS}=0\text{V}$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu\text{A}$	1.2	1.6	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)(1)}$	$V_{GS}=10\text{V}$ $I_D=1\text{A}$		107	115	$\text{m}\Omega$
	$R_{DS(on)(2)}$	$V_{GS}=4.5\text{V}$ $I_D=1\text{A}$		140	150	
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0\text{V}$ $I_S=1\text{A}$			1.2	V

/ Electrical Characteristics(Ta=25)

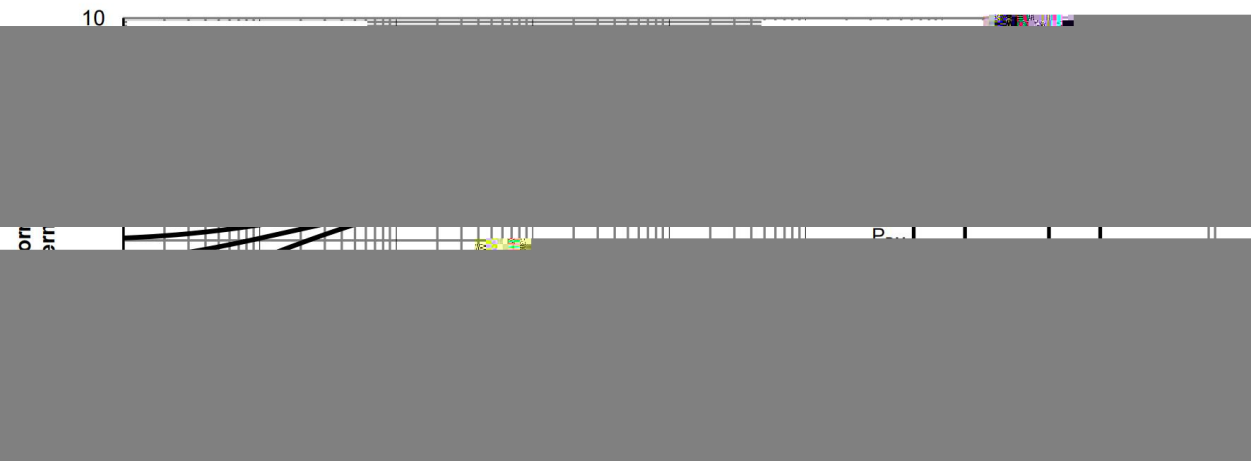
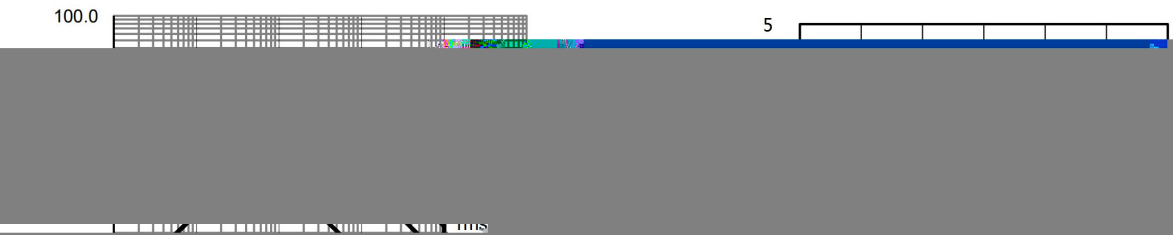
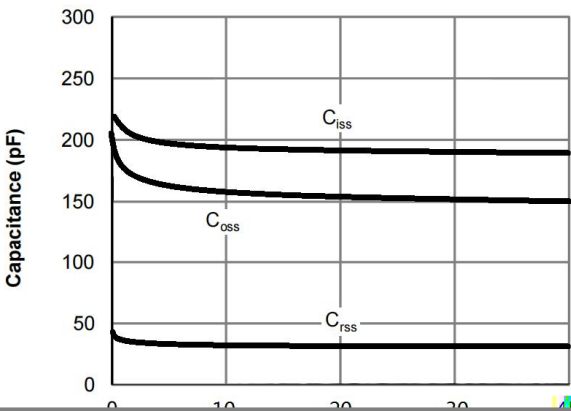
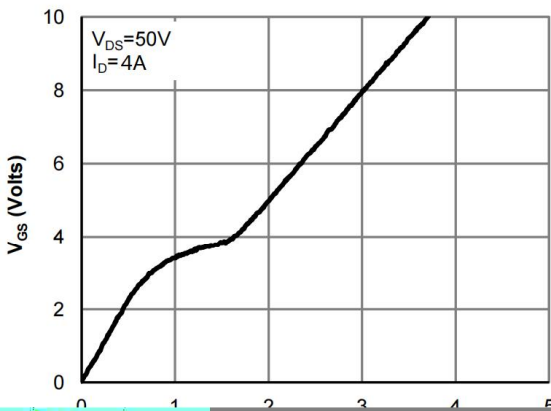
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1MHz$		190		pF
Output Capacitance	C_{oss}			155		
Reverse Transfer Capacitance	C_{rss}			28		
Gate resistance	R_g	$V_{GS}=0V$ $V_{DS}=0V$ $f=1MHz$		0.8		Ω
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V,$ $V_{DS}=50V,$ $I_D=4A$		3.8		nC
Total Gate Charge	$Q_{g(4.5V)}$			1.8		
Gate Source Charge	Q_{gs}			0.8		
Gate Drain Charge	Q_{gd}			0.8		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $R_L=25\Omega$ $V_{DS}=50V$ $R_{GEN}=3\Omega$		5		ns
Turn-On Rise Time	t_r			3		
Turn-Off Delay Time	$t_{d(off)}$			19		
Turn-Off Fall Time	t_f			3		

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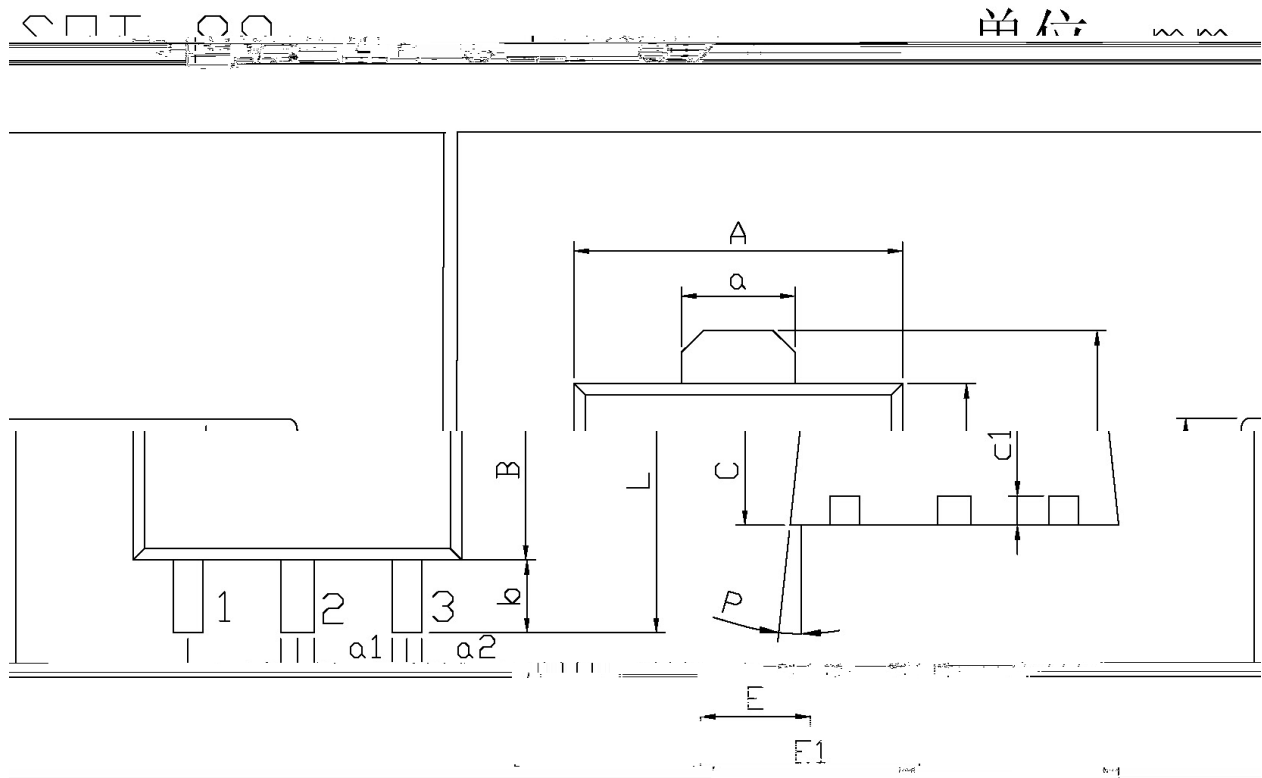
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DATA SHEET

/ Electrical Characteristic Curve

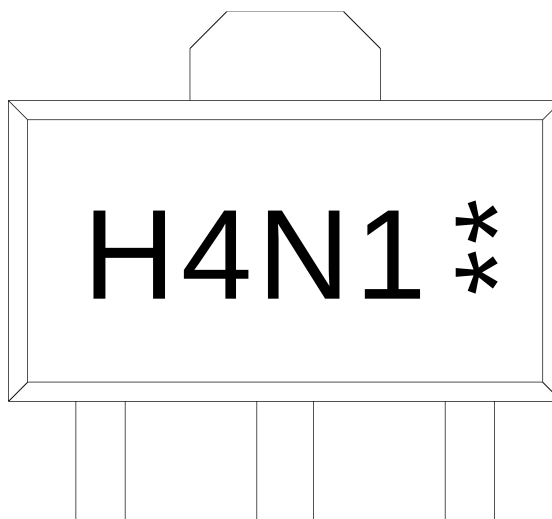


/ Package Dimensions



Dimensions in Millimeters			Dimensions in Inches		
Symbol	Value	Value	Symbol	Value	Value
A	3.20	0.126	A	3.20	0.126
a	1.45	0.057	a	1.45	0.057
B	4.4	0.173	B	4.4	0.173
C	1.40	0.055	C	1.40	0.055
C1	2.80	0.110	C1	2.80	0.110
E	0.80	0.031	E	0.80	0.031
E1	1.20	0.047	E1	1.20	0.047
L	3.20	0.126	L	3.20	0.126
P	6	0.236	P	6	0.236

/ Marking Instructions



说明：

4N1： 为型号代码

H： 为公司代码

**： 为生产批号代码，随生产批号变化。

Note:

4N1: Product Type Code.

H: Company Code.

**： Lot No. Code, code change with Lot No.

() / Temperature Profile for IR Reflow Soldering(Pb-Free)

Note:

- 1 150 180 60 90sec;
- 2 245±5 5±0.5sec;
- 3 2 10°C/sec.

- 1.Preheating:150~180°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.