

/ Descriptions

SOT-23 N MOS

N-CHANNEL MOSFET in a SOT-23 Plastic Package.

/ Features

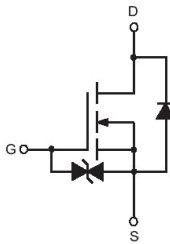
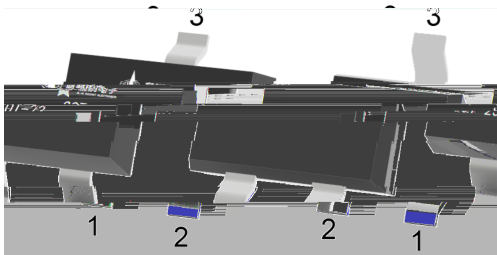
SOT-23

Low $R_{DS(on)}$, rugged and reliable, compact industry standard SOT-23 surface mount package, HF product.

/ Applications

MOSFET

Low current applications such as small servo motor control, power MOSFET gate drivers, and other switching applications.

/ Equivalent Circuit**/ Pinning**

PIN1 G PIN 2 S PIN 3 D

/ Marking

See Marking Instructions.

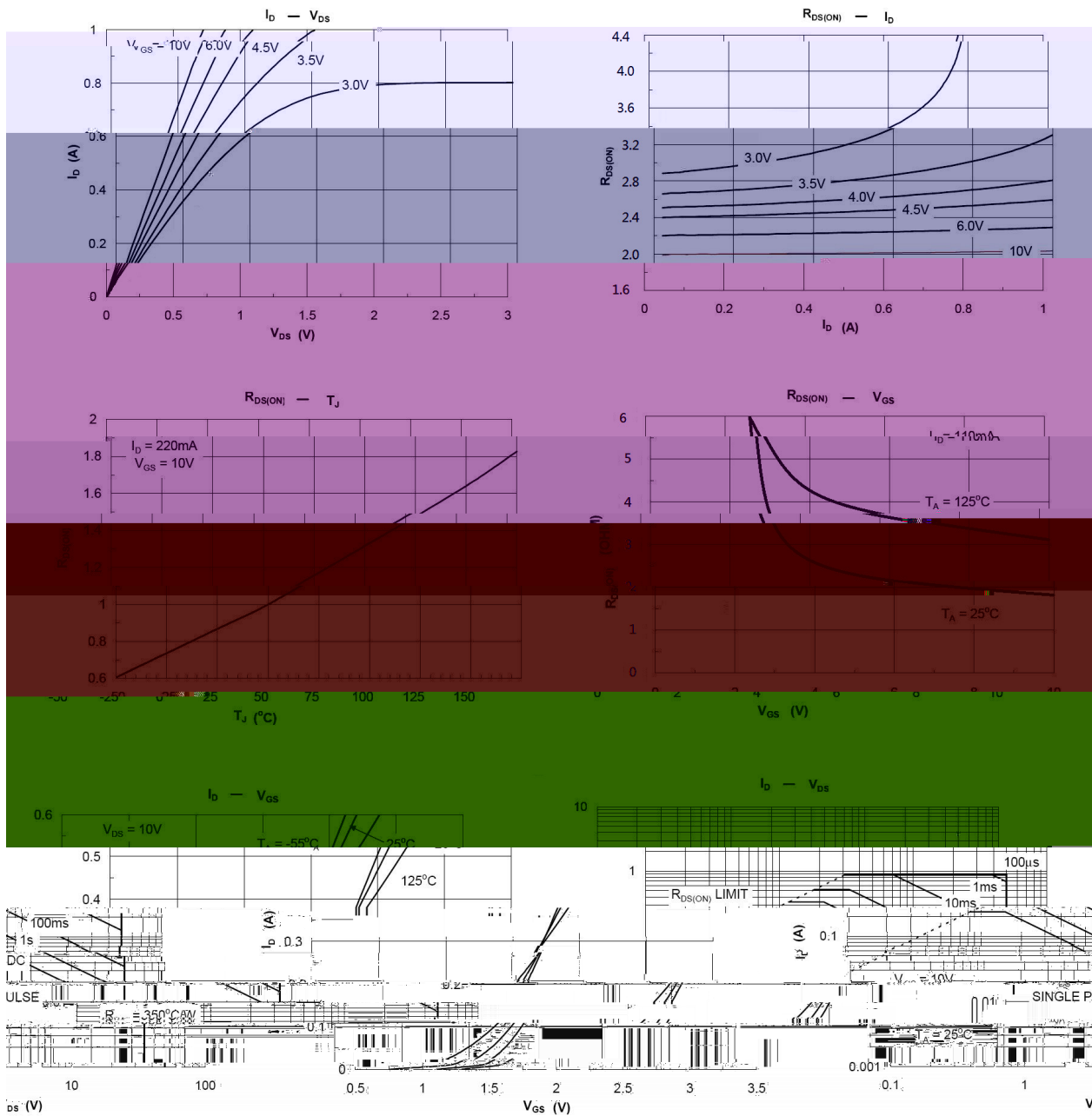
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	50	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current – Continuous	I_D	220	mA
Peak Drain Current	I_{DM}	880	mA
Power Dissipation	P_D	360	mW
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	350	/W
Storage Temperature Range	T_{stg}	-55 150	

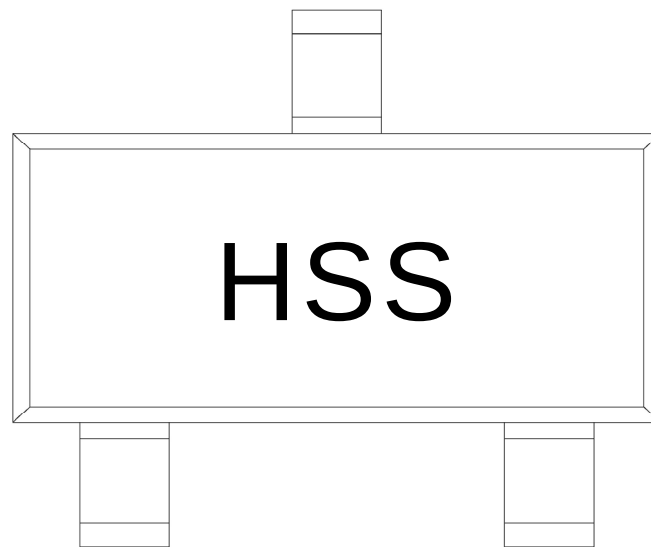
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	V_{DS}	$V_{GS}=0V$ $I_D=250\mu A$	50			V
Zero Gate Voltage Drain Current	$I_{DSS(1)}$	$V_{GS}=0$ $V_{DS}=50V$			0.5	μA
	$I_{DSS(2)}$	$V_{GS}=0$ $V_{DS}=30V$			0.1	μA
Gate–Body Leakage.	I_{GSS}	$V_{DS}=0V$ $V_{GS}=\pm 20$			± 10	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=1.0mA$	0.8	1.6	2.2	V
Static Drain–Source On–Resistance	$R_{DS(on)(1)}$	$V_{GS}=10V$ $I_D=220mA$		1.9	3.5	Ω
	$R_{DS(on)(2)}$	$V_{GS}=4.5V$ $I_D=220mA$		2.5	6.0	Ω
Forward Transconductance	g_{FS}	$V_{DS}=10V$ $I_D=220mA$	0.12	0.5		S
Drain–Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=440mA$		0.8	1.4	V
Input Capacitance	C_{iss}	$V_{DS}=10V$ $V_{GS}=0V$ $f=1.0MHz$			50	pF
Output Capacitance	C_{oss}				25	
Reverse Transfer Capacitance	C_{rss}				8	
Gate Resistance	R_G	$V_{GS}=15mV$ $f=1.0MHz$		9		Ω
Turn–On Delay Time	$t_{d(on)}$	$V_{DD}=30V$ $I_D=290mA$ $V_{GS}=10V$ $R_{GEN}=25\Omega$		2.5	5	ns
Turn–On Rise Time	t_r			9	18	ns
Turn–Off Delay Time	$t_{d(off)}$			20	36	ns
Turn–Off Fall Time	t_f			7	14	ns

/ Electrical Characteristic Curve



/ Marking Instructions



H

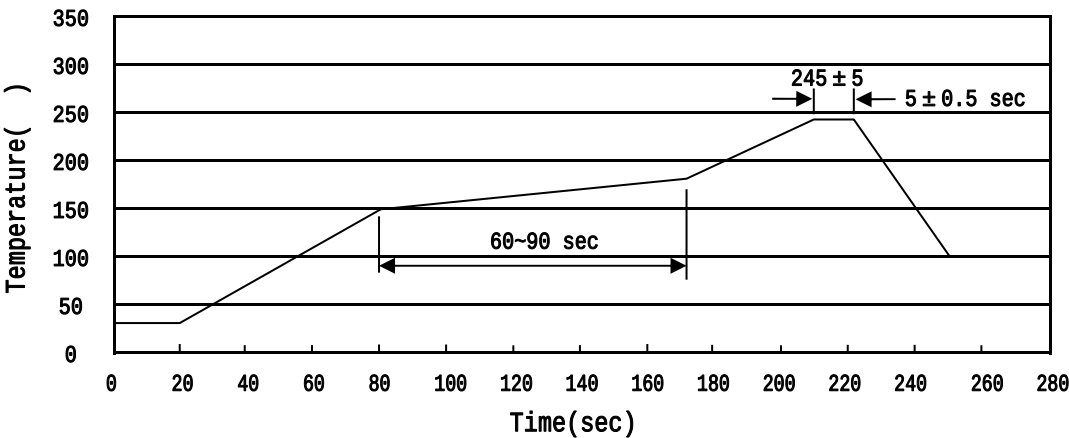
SS

Note:

H: Company Code

SS: Product Type Code

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



Note:

- 1

150 180

60 90sec;

1.Preheating:150~180 , Time:60~90sec.
- 2

245±5

5±0.5sec;

2.Peak Temp.:245±5 , Duration:5±0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	只 卷盘	卷盘 盒	只 盒	盒 箱	只 箱		盒	箱
SOT-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

/ Notices