

/ Descriptions

SOT-23 P

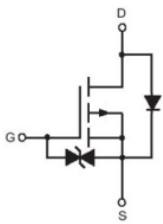
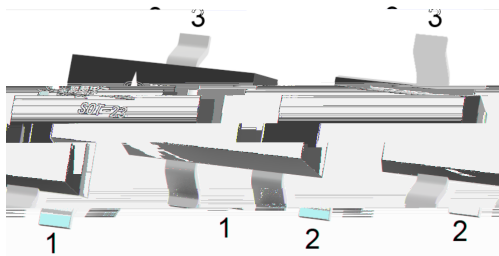
P-CHANNEL MOSFET in a SOT-23 Plastic Package.

/ Features

Low threshold voltage, Direct interface to C-MOS, TTL etc, High-speed switching,ESD Improved
Capability 1000V,HF Product.

/ Applications

Line current interrupter in telephone sets, Relay, High speed and line transformer drivers.

/ Equivalent Circuit**/ Pinning**

PIN1 G

PIN 2 S

PIN 3 D

/ Marking

Marking	HSP
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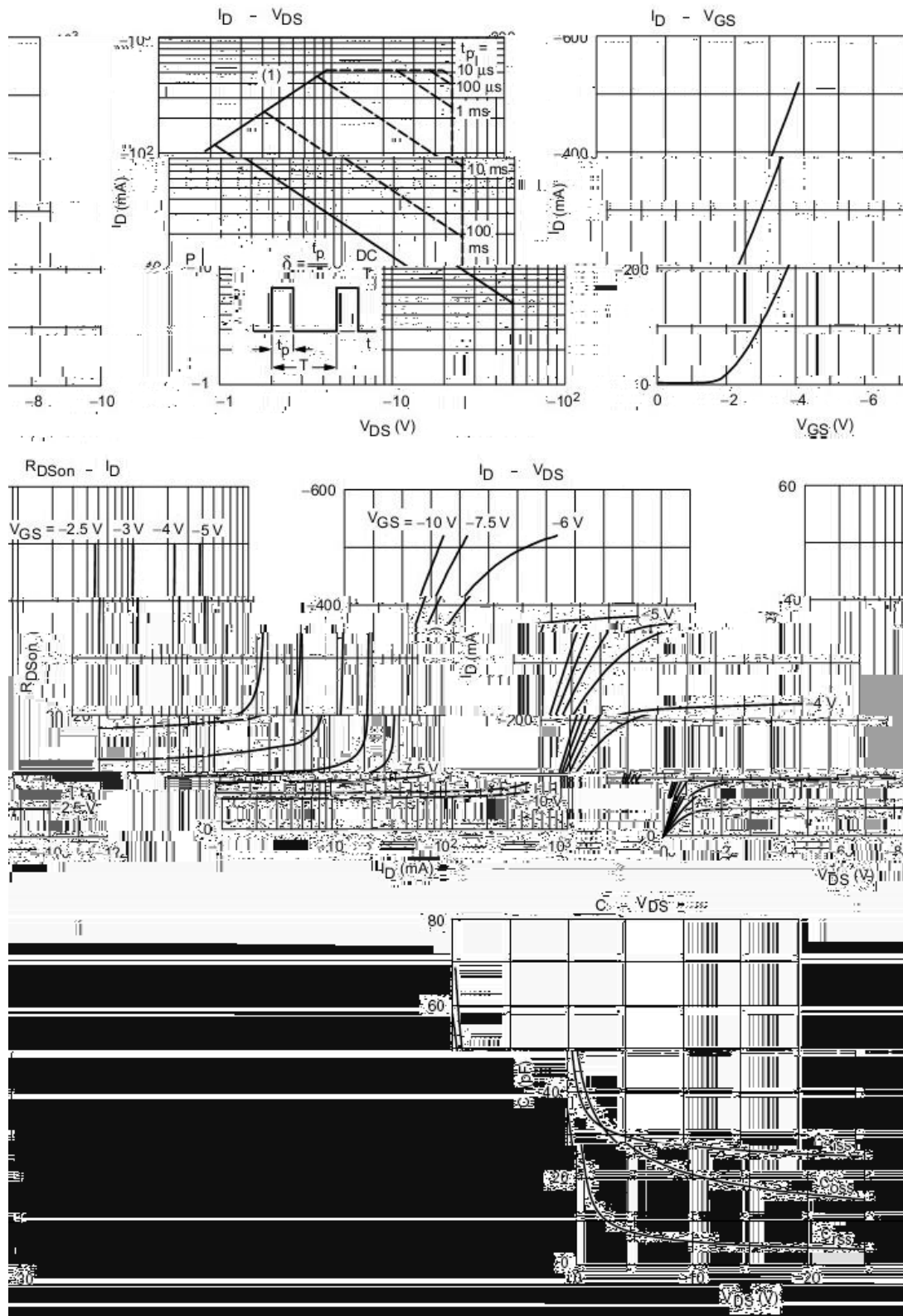
/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-50	V
Drain Current – Continuous	I_D	-130	mA
Peak Drain Current	I_{DM}	-520	mA
Gate-Source Voltage	V_{GS}	± 20	V
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	500	/W
Storage Temperature Range	T_{stg}	-65 to 150	
Junction Temperature Range	T_j	150	

/ Electrical Characteristics($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	V_{DS}	$V_{GS}=0V$ $I_D=-250\mu A$	-50			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu A$	-0.8		-2.0	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{GS}=0V$ $V_{DS}=-40V$			-100	nA
		$V_{GS}=0V$ $V_{DS}=-50V$			-10	μA
		$V_{GS}=0V$ $V_{DS}=-50V$ $T_j=125^\circ C$			-60	μA
Gate–Body Leakage.	I_{GSS}	$V_{DS}=0V$ $V_{GS}=\pm 20V$			± 10	μA
Static Drain–Source On–Resistance	$R_{DS(on)}$	$V_{GS}=-10V$ $I_D=-130mA$		1.8	5	Ω
Forward Transconductance	G_{FS}	$V_{DS}=-25V$ $I_D=-130mA$	50			mS
Input Capacitance	C_{iss}	$V_{DS}=-25V$ $V_{GS}=0V$ $f=1.0MHz$		25	45	pF
Output Capacitance	C_{oss}			15	25	
Reverse Transfer Capacitance	C_{rss}			3.5	12	
Turn–On Time	t_{on}	$V_{GS}=0V \sim -10V$ $V_{DD}=-40V$ $I_D=-200mA$		3		ns
Turn–Off Time	t_{off}	$V_{GS}=-10V \sim 0V$ $V_{DD}=-40V$ $I_D=-200mA$		7		

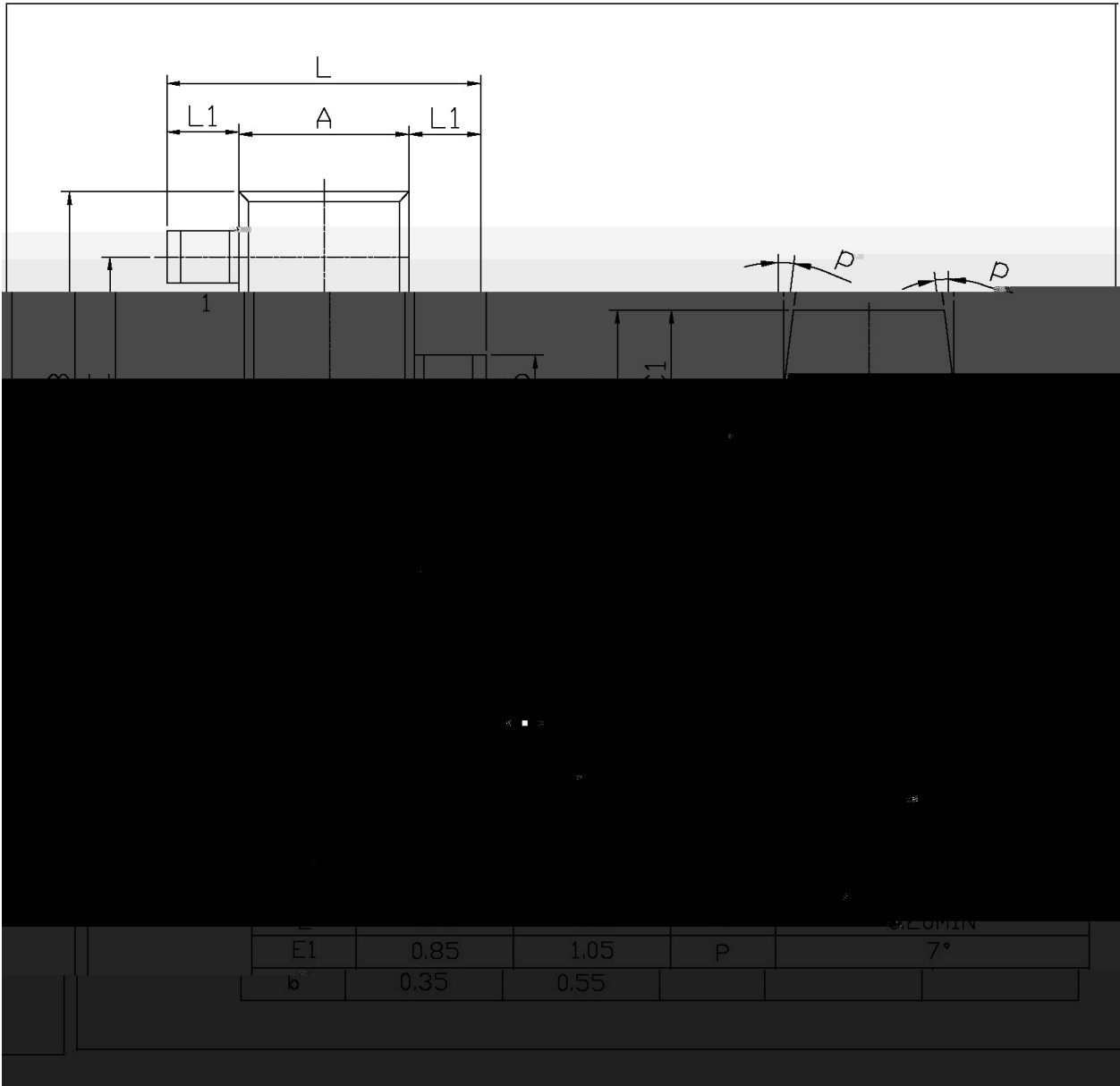
/ Electrical Characteristic Curve



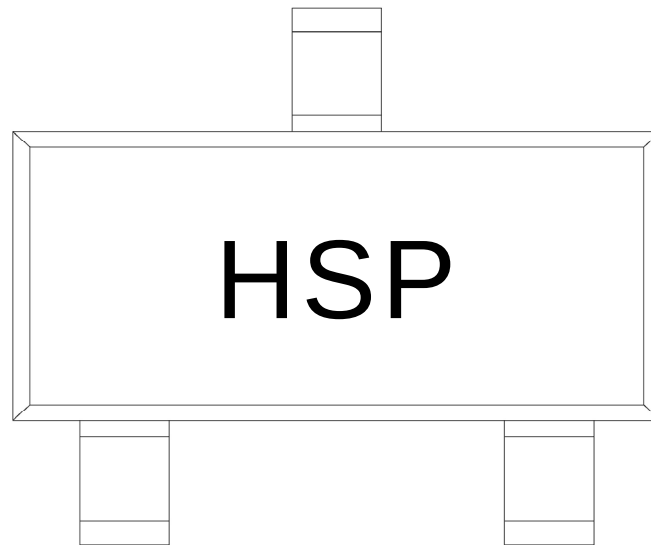
/ Package Dimensions

SOT-23

单位：mm



/ Marking Instructions



H

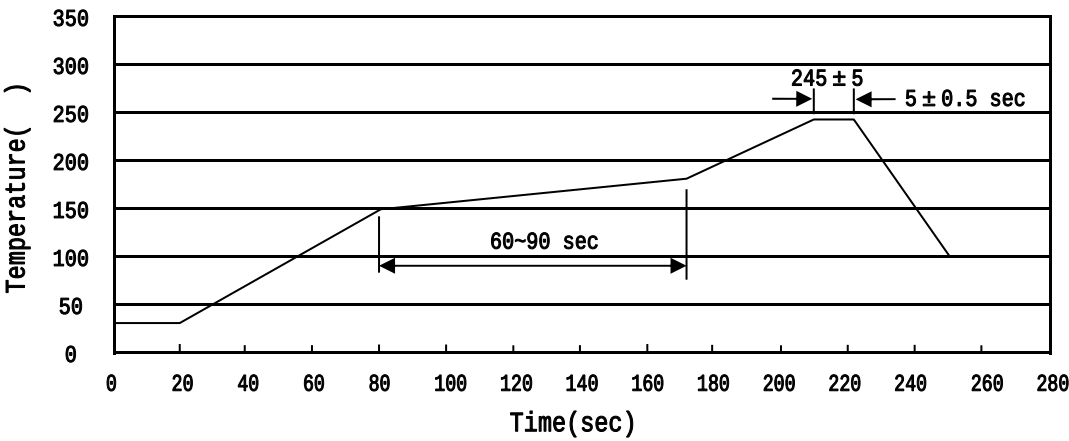
SP

Note:

H: Company Code

SP: 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	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

/ Notices