

BSS84

Rev.I Nov.-2023

/ Descriptions

SOT-23

P

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

/ Features

C-MOS TTL

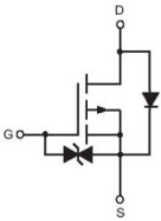
1000V

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

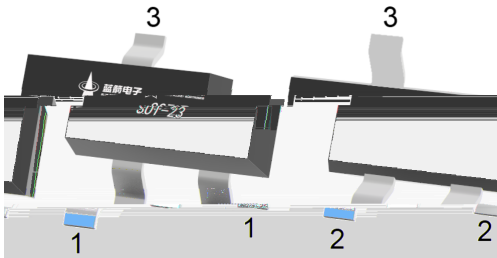
/ Applications

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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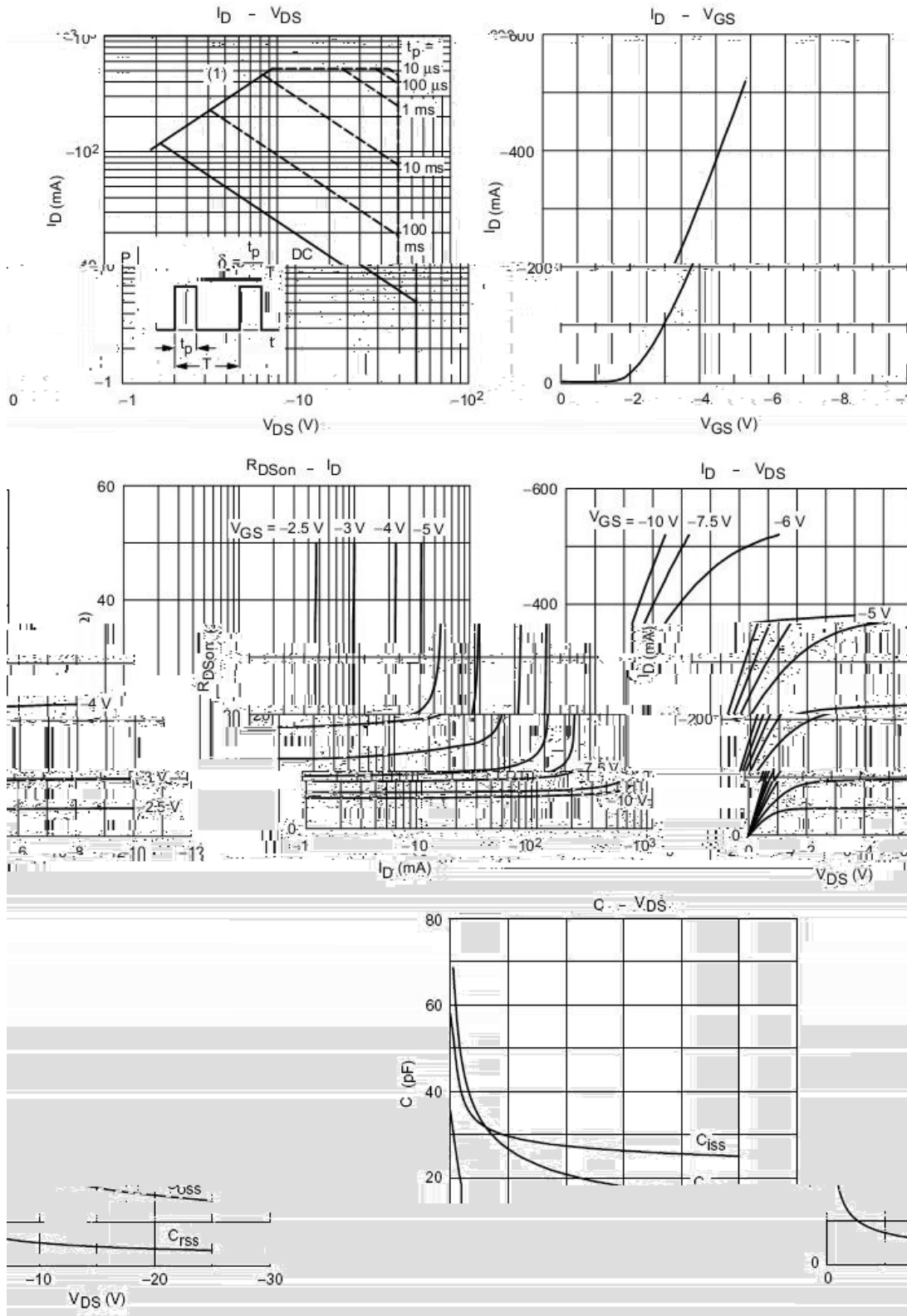
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V _{DSS}	-50	V
Drain Current – Continuous	I _D	-130	mA
Peak Drain Current	I _{DM}	-520	mA
Gate-Source Voltage	V _{GSS}	±20	V
Thermal Resistance, Junction-to-Ambient	R _{JA}	500	/W
Storage Temperature Range	T _{stg}	-65 to 150	
Junction Temperature Range	T _j	150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	V _{DSS}	V _{GS} =0V I _D =-250 A	-50			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =-250 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	A
		V _{GS} =0V V _{DS} =-50V T _j =125 °C			-60	A
Gate–Body Leakage.	I _{GSS}	V _{DS} =0V V _{GS} =±20V			±10	A
Static Drain–Source On–Resistance	R _{DS(on)}	V _{GS} =-10V I _D =-130mA		1.8	5	
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~ 10V V _{DD} = 40V I _D = 200mA		3		ns
Turn–Off Time	t _{off}	V _{GS} =-10V~0V V _{DD} = 40V I _D = 200mA		7		

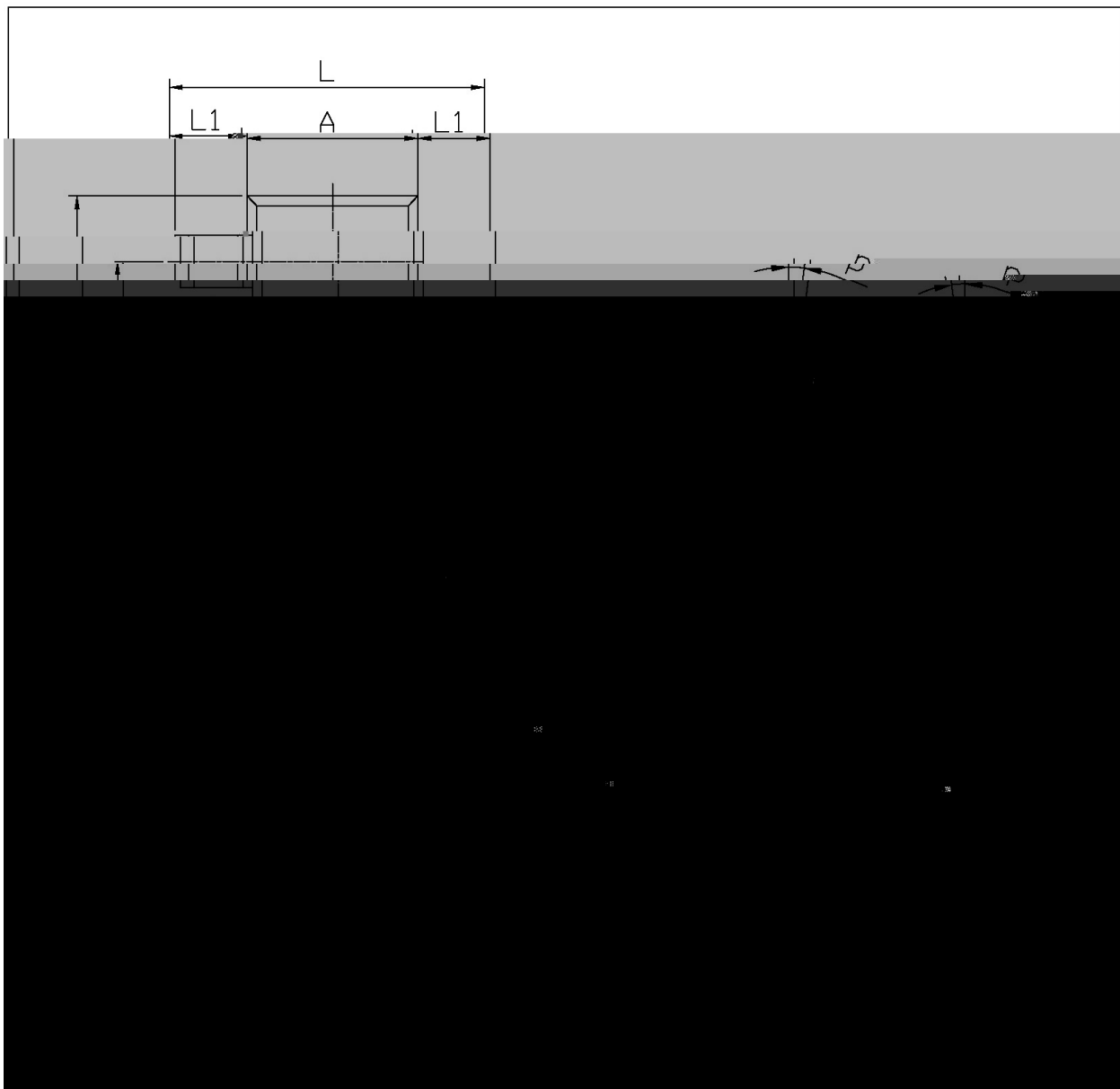
/ Electrical Characteristic Curve



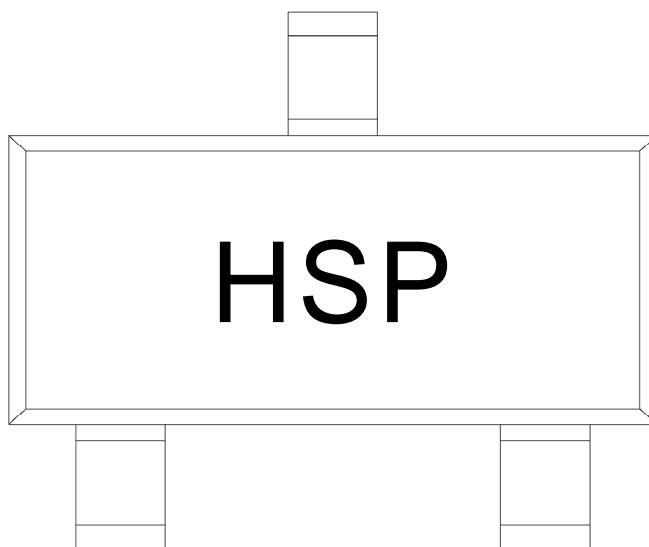
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



H

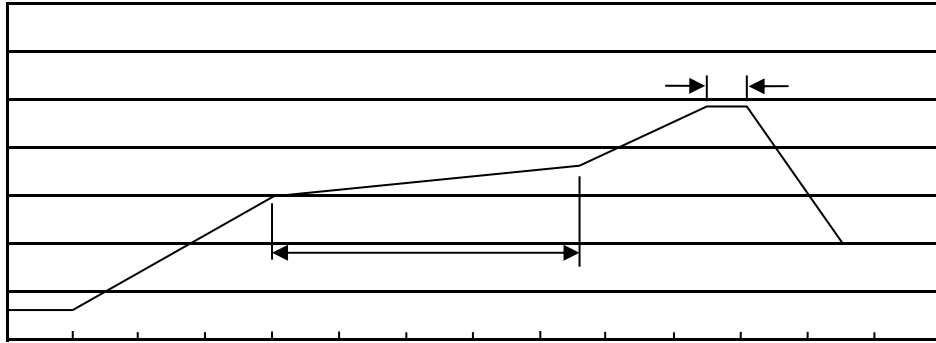
SP

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 x8	180x120x180	390x385x205

/ Notices