

/ Descriptions

SOT-23 P

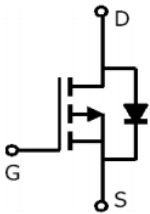
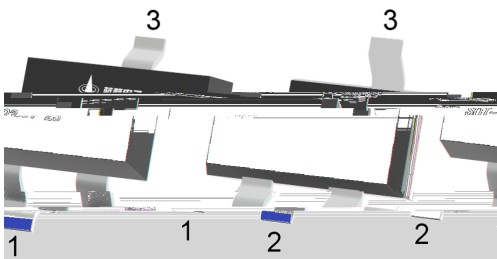
P- CHANNEL MOSFET in a SOT-23 Plastic Package.

/ Features $V_{DS} = -30V$ $I_D = -3.2A$ $R_{DS(ON)} @ -10V \leq 90m\Omega$ (Typ. 54m Ω) $R_{DS(ON)} @ -4.5V \leq 110m\Omega$ (Typ. 63m Ω)

HF Product.

/ Applications

Notebook, Load Switch, Battery Protection, Hand-held Instruments.

/ 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}	-30	V
Gate–Body Leakage Voltage		V_{GSS}	± 12	V
Drain Current – Continuous		I_D	-3.2	A
Pulsed Drain Current		I_{DM}	-13.2	A
Power Dissipation		P_D	1.5	W
Operating and Storage Temperature Range		T_J, T_{STG}	-55 150	°C
Maximum Junction-to-Ambient	t 10s	R_{JA}		
Maximum Junction-to-Ambient	Steady-State		125	/W
Maximum Junction-to-Lead	Steady-State	R_{JL}		

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	$V_{(BR)DS}$	$V_{GS}=0V$ $I_D=-250\mu A$	-30	-33		V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu A$	-0.5		-1.5	V
Static Drain–Source On–Resistance	$R_{DS(on)}$	$V_{GS}=-10V$ $I_D=-3A$		54	90	mΩ
		$V_{GS}=-4.5V$ $I_D=-2A$		63	110	mΩ
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-30V$ $V_{GS}=0V$			-1.0	μA
Gate–Body leakage current	I_{GSS}	$V_{GS}=\pm 12V$ $V_{DS}=0V$			± 100	nA
Drain–Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=-1A$ $T_J=25^\circ C$			-1.2	V
Gate resistance	R_g	f=1MHz		7.5		Ω
Input Capacitance	C_{iss}	$V_{DS}=-15V$ $V_{GS}=0V$ $f=1.0MHz$		350		pF
Output Capacitance	C_{oss}			45		
Reverse Transfer Capacitance	C_{rss}					
Total Gate Charge	$Q_g(10V)$	$V_{DS}=-15V$ $V_{GS}=-10V$ $I_D=-3A$		5.2		nC
Total Gate Charge	$Q_g(4.5V)$			2.7		
Gate-to-Source Charge	Q_{gs}					
Gate-to-Drain Charge	Q_{gd}			1.3		
Turn–On Delay Time	$t_{d(on)}$	$V_{DS}=-15V$ $V_{GS}=-10V$ $R_L=5\Omega$ $R_{GEN}=3\Omega$		8.5		ns
Turn–On Rise Time	t_r			4		
Turn–Off Delay Time	$t_{d(off)}$			13.2		
Turn–Off Fall Time	t_f			4.3		

25

1.1

/ Electrical Characteristic Curve

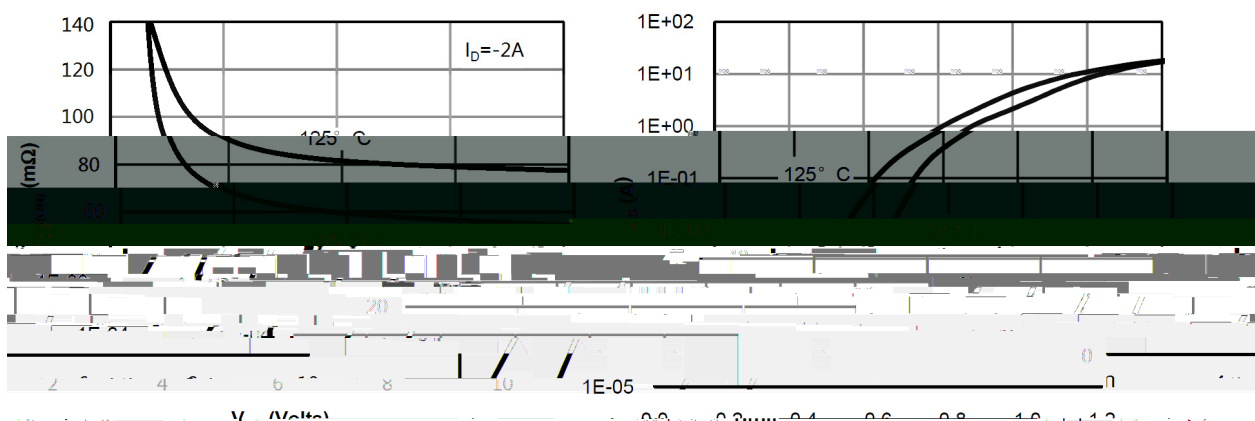
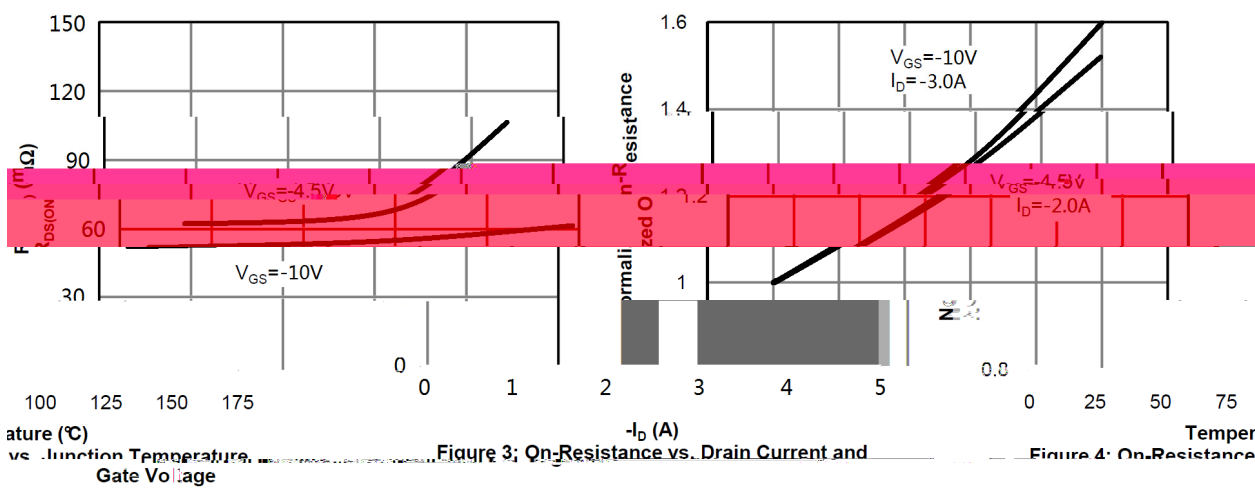
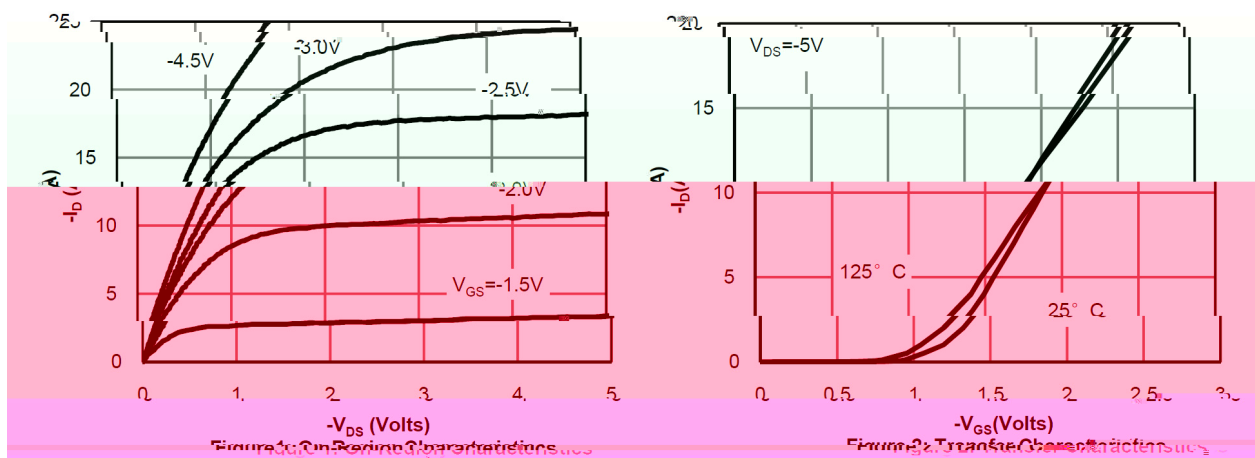
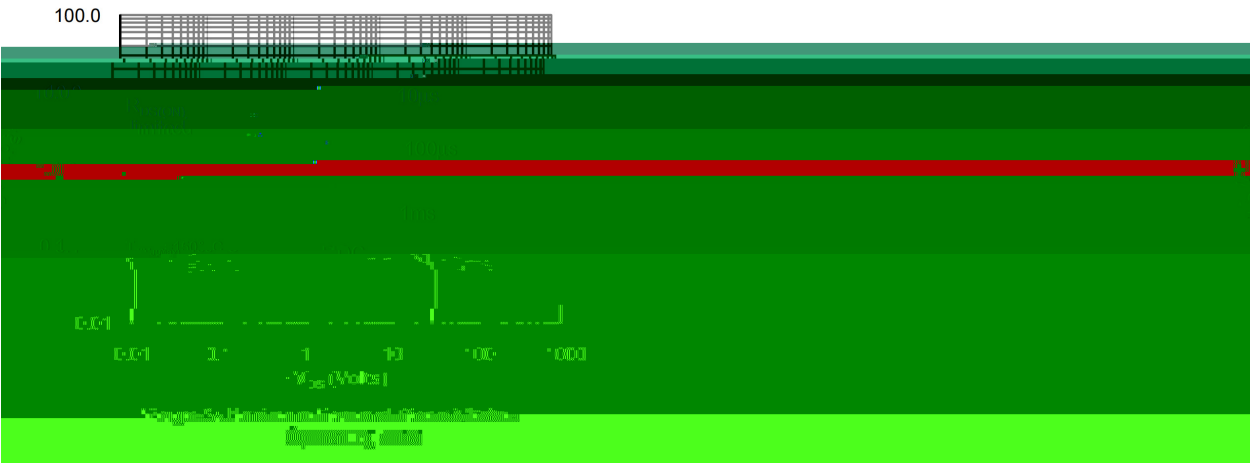
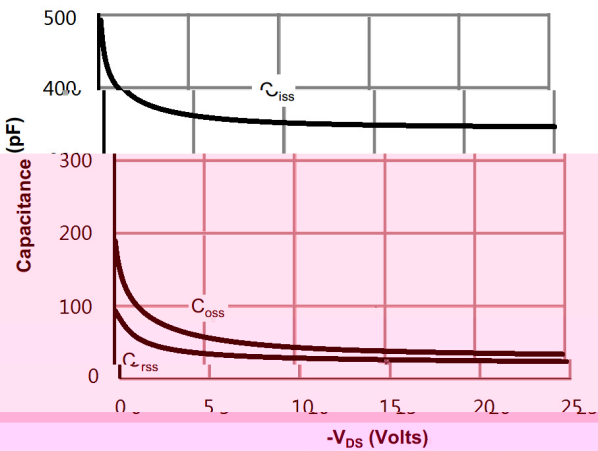
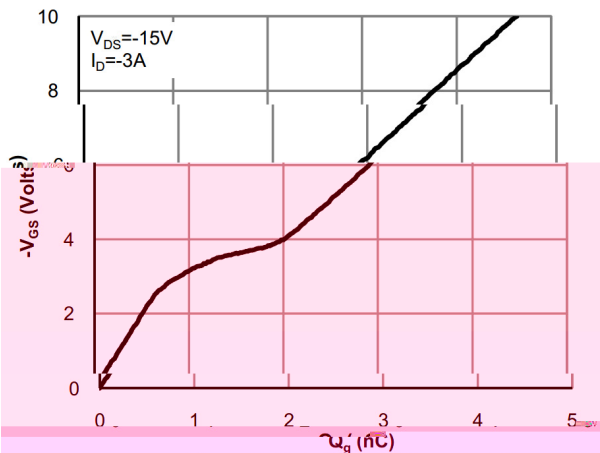


Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

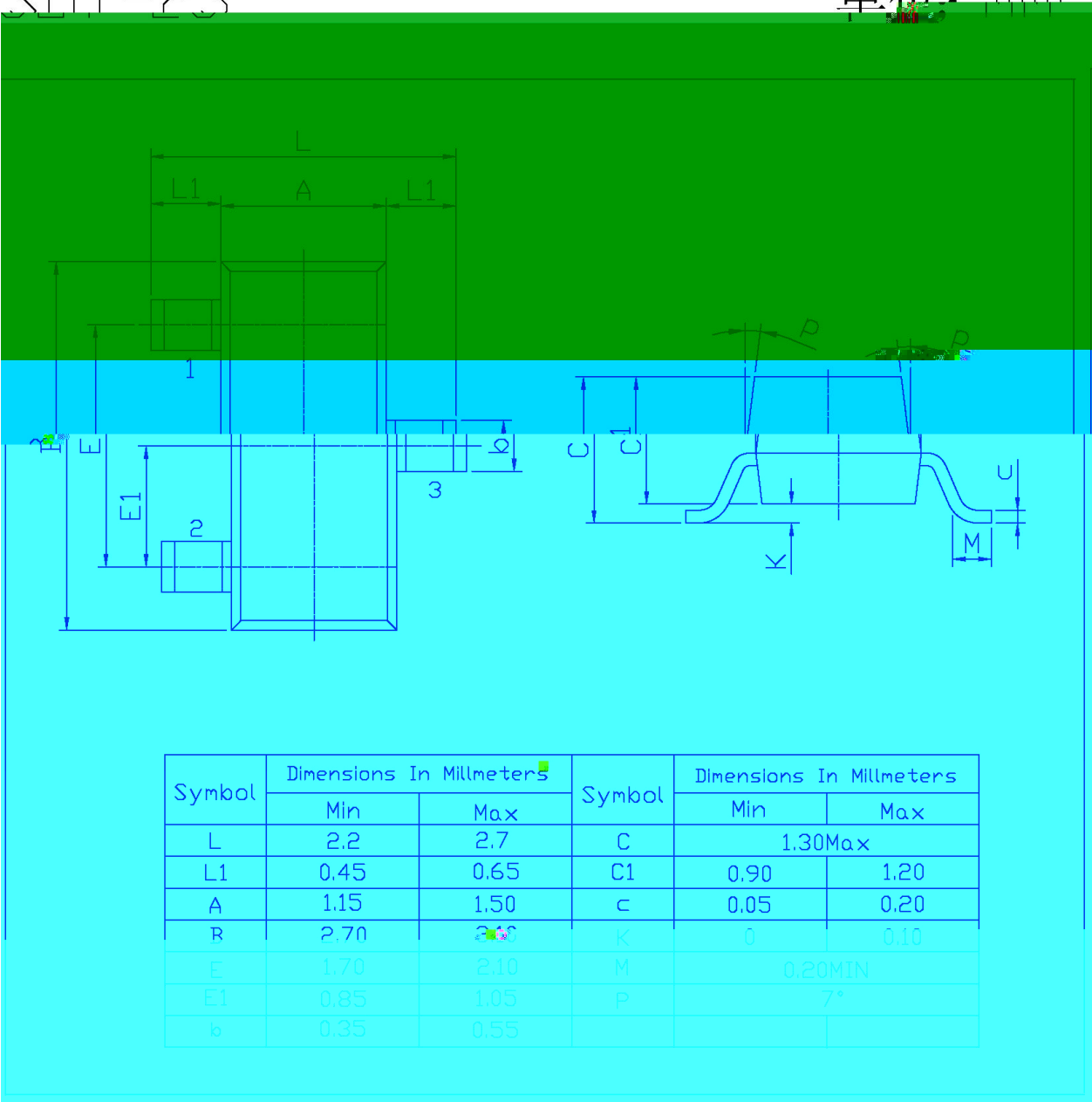
/ Electrical Characteristic Curve



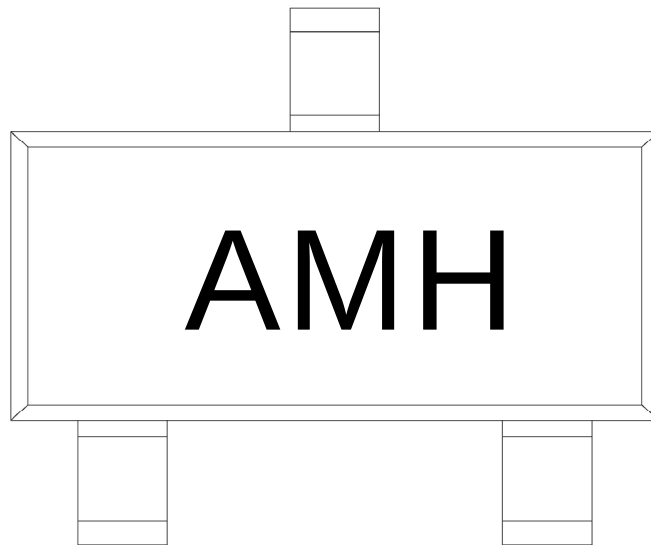
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions

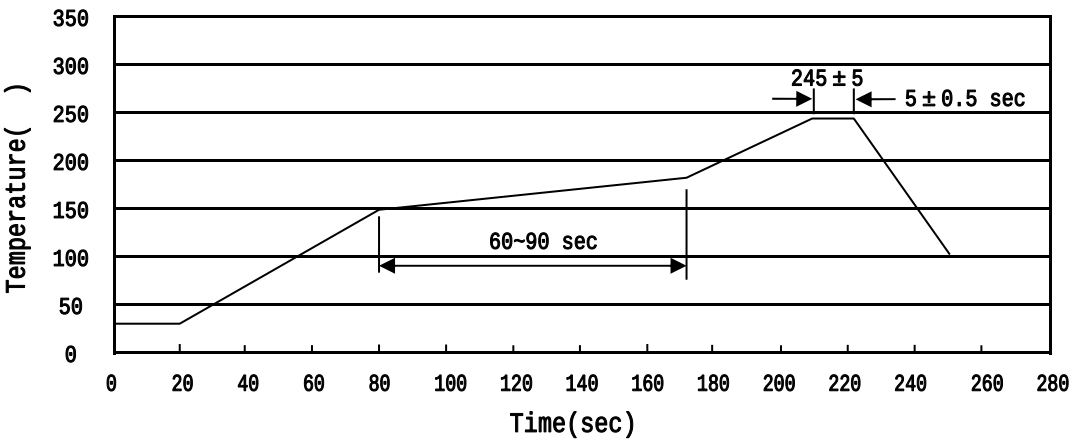


H:
AM

Note:

H Company Code
AM: Product Type

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



Note:

- | | | | | | |
|---|-------|-----|----|-----------|--|
| 1 | 150 | 180 | 60 | 90sec; | 1.Preheating:150~180 °C , Time:60~90sec. |
| 2 | 245±5 | | | 5±0.5sec; | 2.Peak Temp.:245±5 °C , Duration:5±0.5sec. |
| 3 | | 2 | 10 | /sec. | 3. Cooling Speed: 2~10 °C/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