/ Descriptions

SOT23-6 P MOS

P- CHANNEL MOSFET in a SOT23-6 Plastic Package.

/ Features

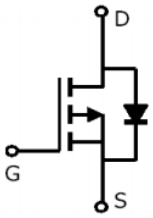
Ultra Low on-resistance. fast switching.Low on voltage,HF product.

÷ / Applications

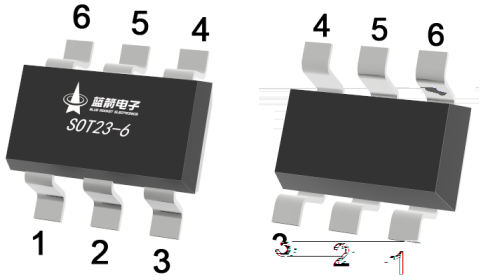
PWM

PWM application & Load switch

Ô / Equivalent Circuit



/ Pinning



PIN1 D PIN 2 D PIN 3 G PIN 4 S PIN 5 D PIN 6 D

/ Marking

Marking	5P06 ****

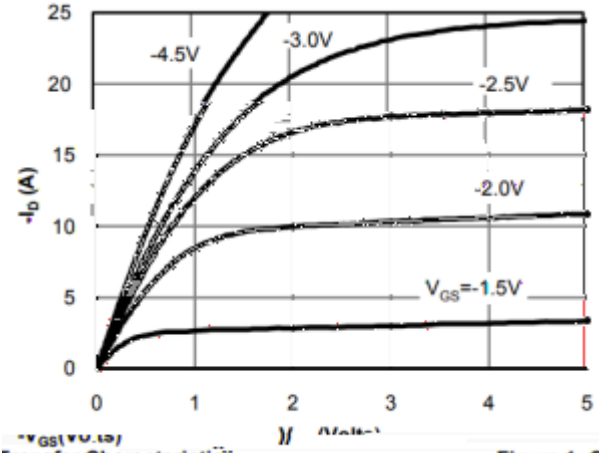
/ Absolute Maximum Ratings(Ta=25)

Parameter		Symbol	Rating	Unit
Drain–Source Voltage		V_{DSS}	-60	V
Gate–Body Leakage Voltage		V_{GSS}	±20	V
Drain Current - Continuous		I_D	-5	A
Power Dissipation (Surface Mounted on FR4 Board, t 0 10 sec.)		P_D	1.5	W
Operating and Storage Temperature Range		T_J,T_{STG}	-55 150	
Maximum Junction-to-Ambient	t 0 10s	$R_{©JA}$	118.6	/W
Maximum Junction-to-Ambient	Steady-State		161.6	/W
Maximum Junction-to-Lead	Steady-State	$R_{©JL}$	83.3	/W

® / Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V I_D=-250 A	-60	-63		V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=-250 A	-1	-1.5	-2.5	V
Static Drain–Source On–Resistance	$R_{DS(on)}$	V_{GS}=-10V I_D=-2A		84	100	m
		V_{GS}=-4.5V I_D=-1A		103	125	m
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-60V V_{GS}=0V			-1.0	A
Gate–Body Leakage.	I_{GSS}	V_{GS}=-20V			-100	nA
		V_{GS}=20V			100	nA
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=-1A T_J=25			-1.2	V
Input Capacitance	C_{iss}	V_{DS}=-25V V_{GS}=0V f=1.0MHz		885		pF
Output Capacitance	C_{oss}			90		
Reverse Transfer Capacitance	C_{rss}			64		
Total Gate Charge	Q_g(-10V)	V_{DS}=-30V V_{GS}=-10.0V I_D=-5A		25		nC
Total Gate Charge	Q_g(-4.5V)			9.6		
Gate-to-Source Charge	Q_{gs}			3		
Gate-to-Drain Charge	Q_{gd}			7		
Turn–On Delay Time	$t_{d(on)}$	V_{DD}=-30V V_{GS}=-10V R_L=7.5 R_G=3		8		ns
Turn–On Rise Time	t_r			4		
Turn–Off Delay Time	$t_{d(off)}$			32		
Turn–Off Fall Time	t_f			7		

Ô / Electrical Characteristic Curve



Transfer Characteristics

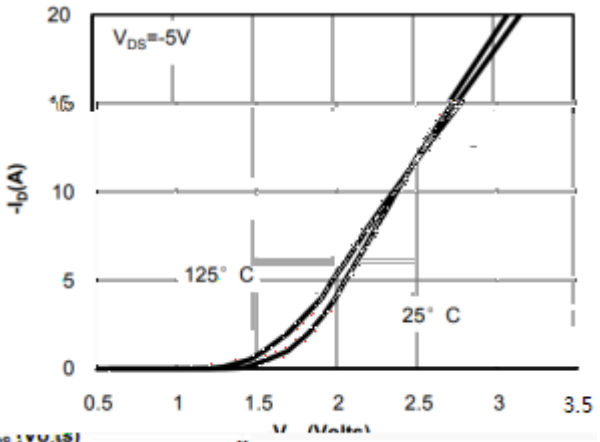
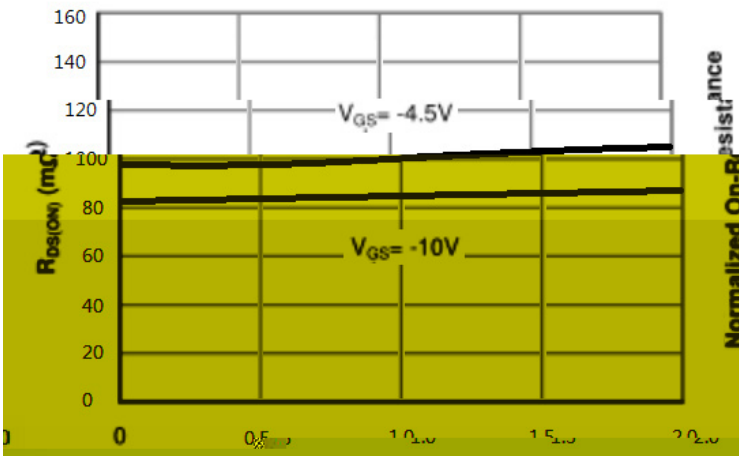


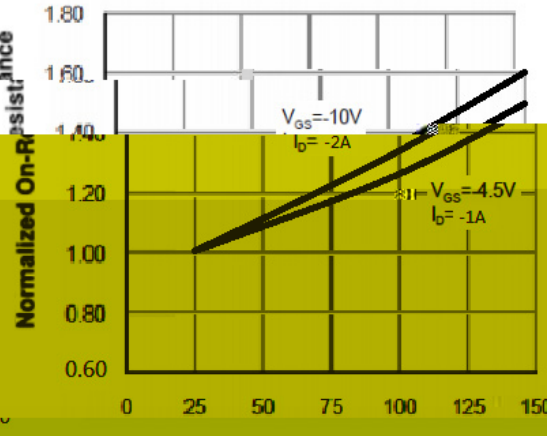
Figure 1: On-Region Characteristics

Figure 2:



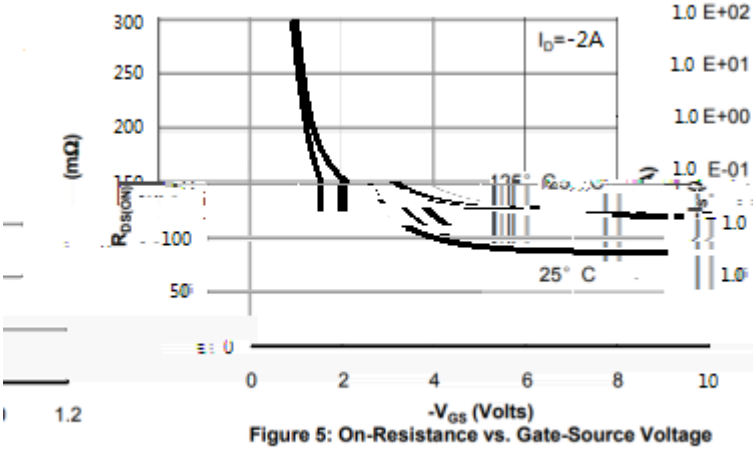
$-I_D$ (A)

Figure 3: On-Resistance vs. Drain Current and Gate Voltage



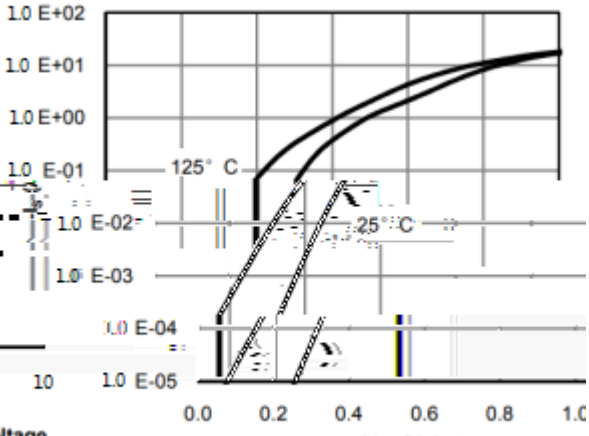
Temperature (℃)

Figure 4: On-Resistance vs. Junction Temperature



$-V_{GS}$ (Volts)

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



$-V_{SD}$ (Volts)

Figure 6: Body-Diode Characteristics

Ô / Electrical Characteristic Curve

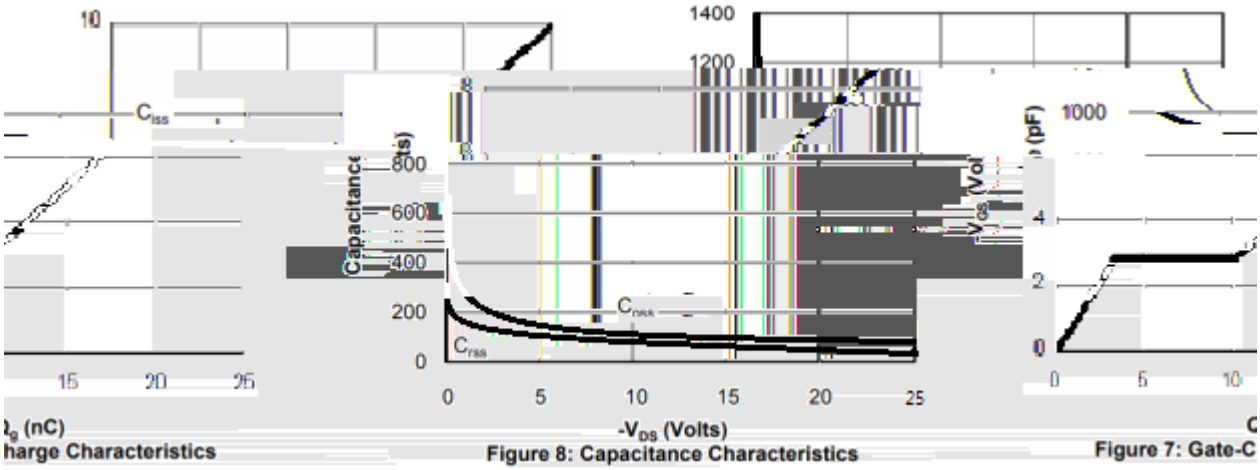


Figure 8: Capacitance Characteristics

Figure 7: Gate-C

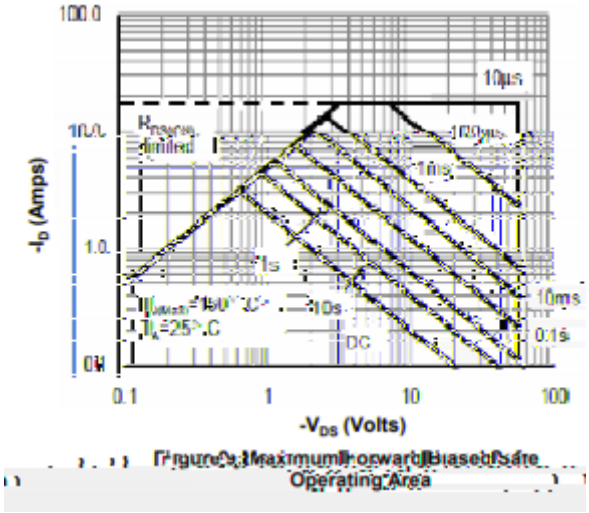


Figure 9: Maximum Forward Biased Safe Operating Area

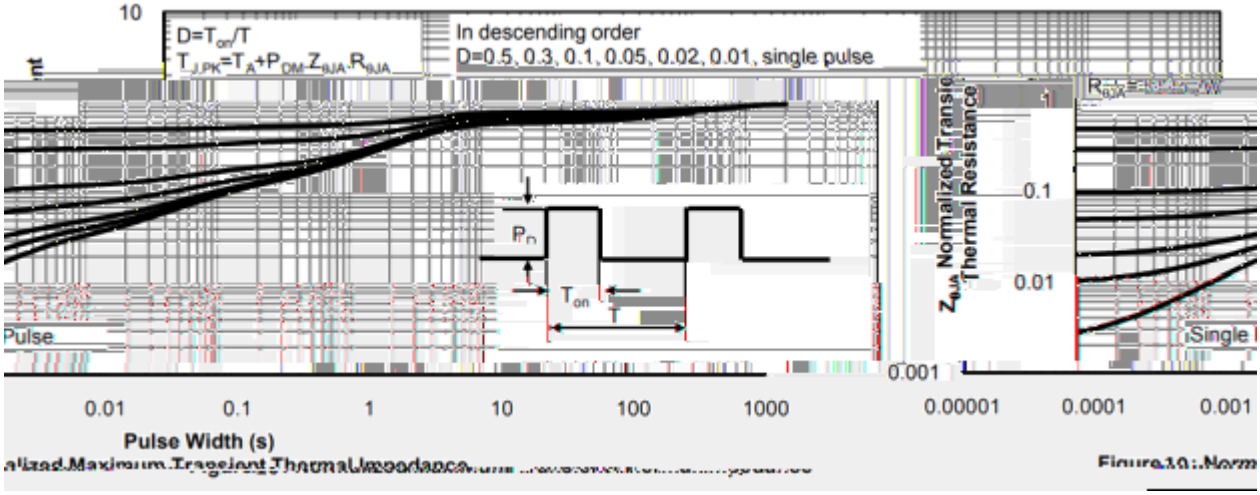
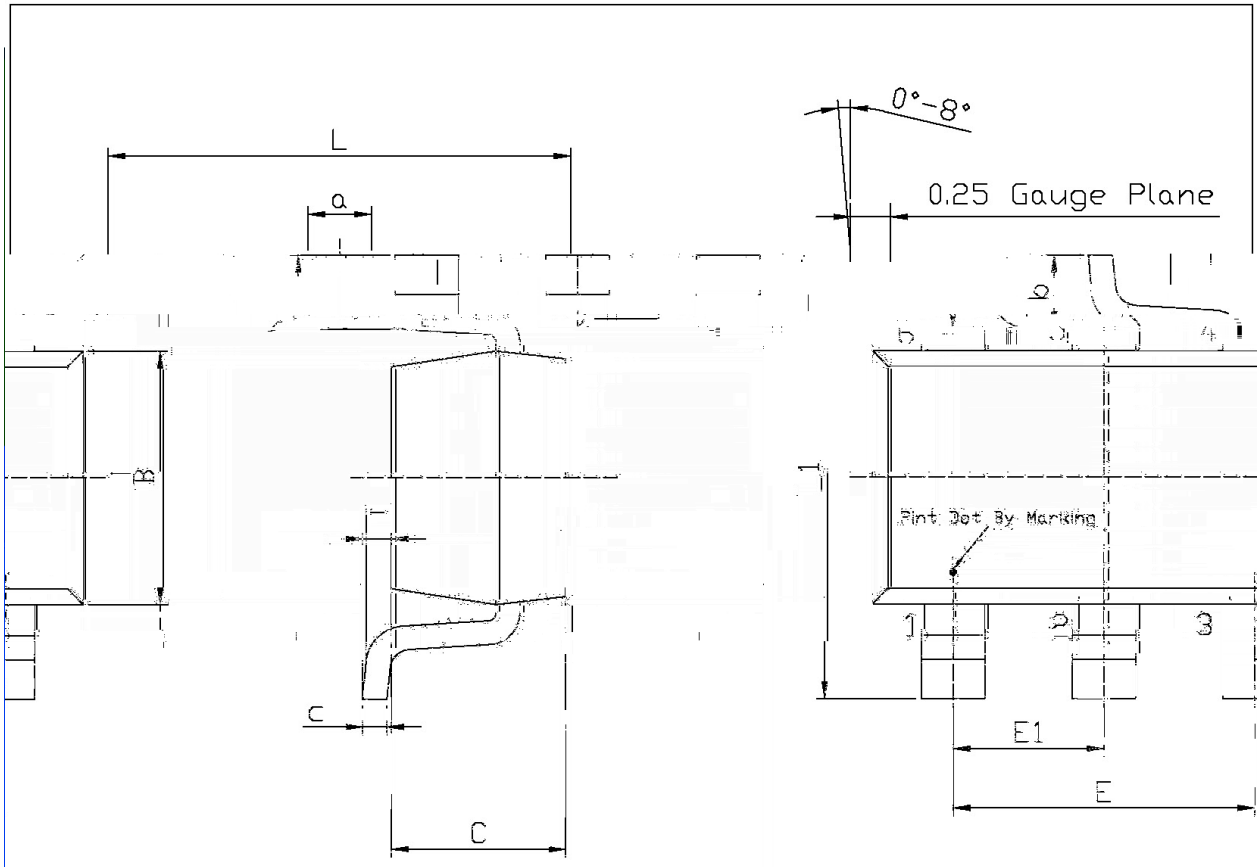


Figure 10: Norm

Ø / Package Dimensions



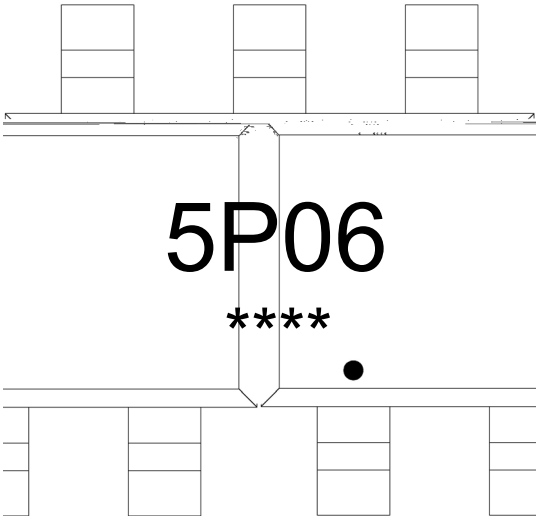
Unit: mm

Millimeters Max	Symbol	Dimensions In Millimeters Min	Max
3.02	E1	0.85	1.05
1.70	a	0.35	0.50
1.30	c	0.10	0.20
3.00	b	0.35	0.55
2.00	F	0	0.15

Symbol	Dimensions In Min
L	2.82
B	1.50
C	0.90
L1	2.60
E	1.80

SOT23-6

/ Marking Instructions



5P06:

****:

Note:

5P06	Product Type
****:	Company Code

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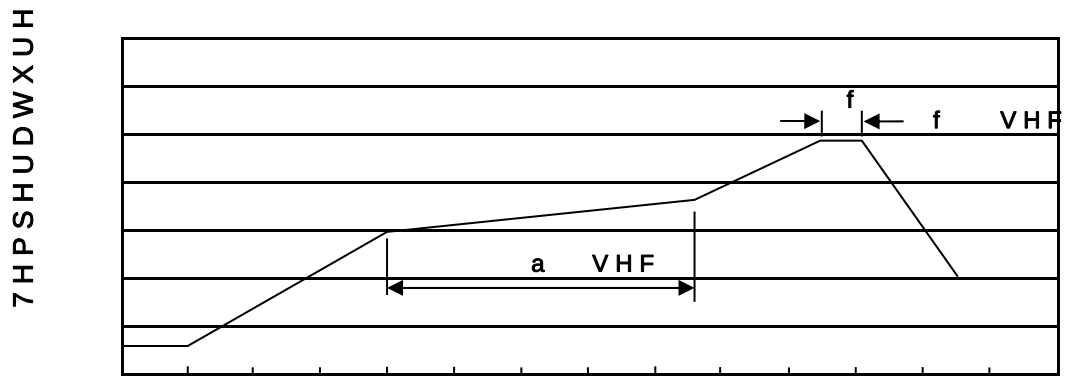

7LPH VHF

				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 7>û ~ E	Units ;>û ¦H					Dimension ;>û p . (unit ÆEmm³)		
	Units/Reel / --	Reels/Inner Box -- /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Reel	Inner Box×	Outer Box1ç
SOT23-5/6	3,000	10	30,000	4	120,000	7Ø T×8	210×205×205	445×230×435

/ Notices