

P-Channel Enhancement Mode Field Effect Transistor in a SOP-8 Plastic Package.

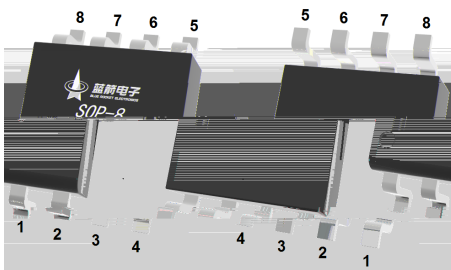
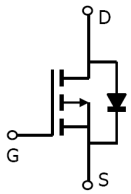
$V_{DS} (V) = -30V$ $I_D = -16A$ ($V_{GS} = \pm 20V$)

$R_{DS(ON)}@-10V$ 8.0m (Typ.7.0m)

$R_{DS(ON)}@-4.5V$ 15m (Typ.10.3m)

HF Product.

Power Management in Notebook computer, Portable Equipment and Battery powered systems.

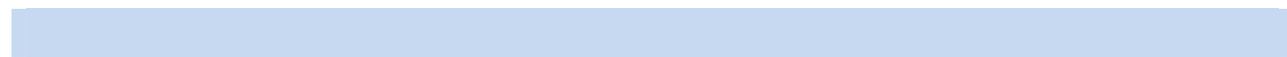


PIN 1	S	PIN 2	S	PIN 3	S	PIN 4	G
PIN 5	D	PIN 6	D	PIN 7	D	PIN 8	D

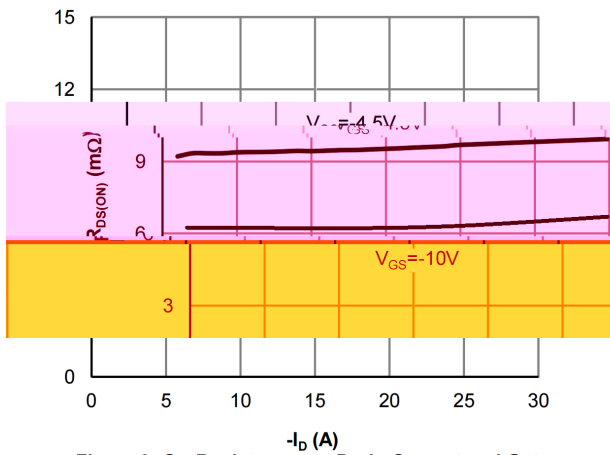
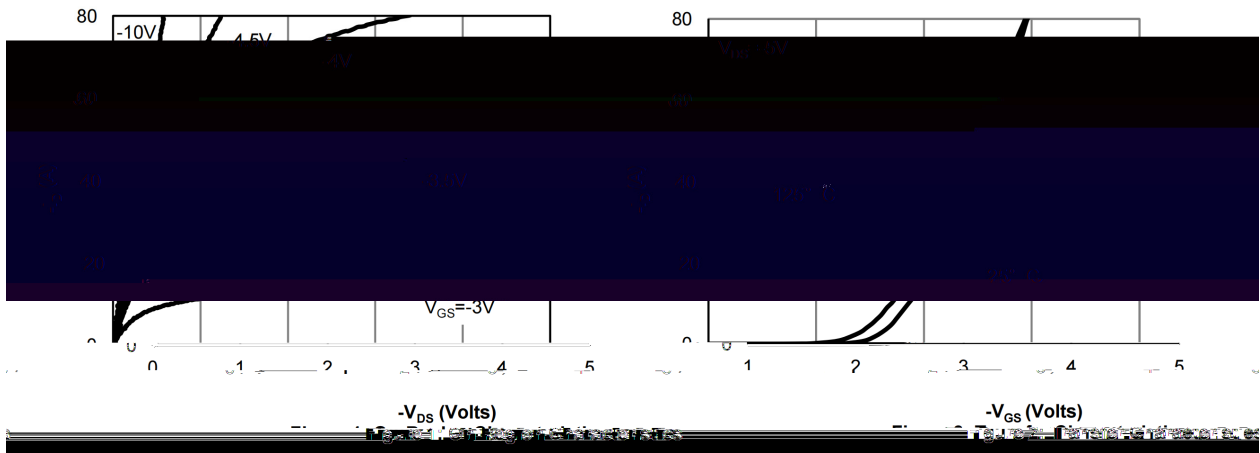
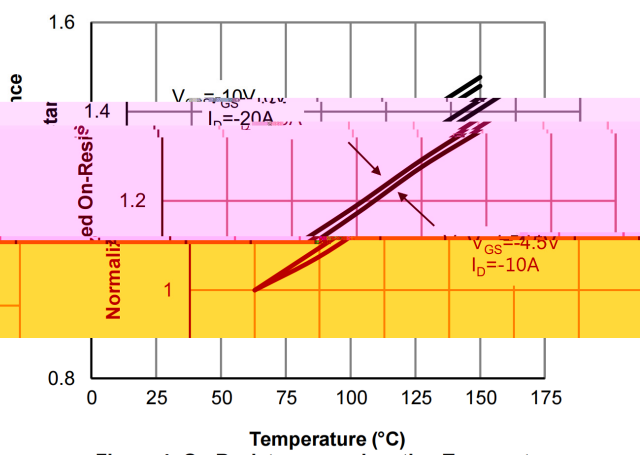
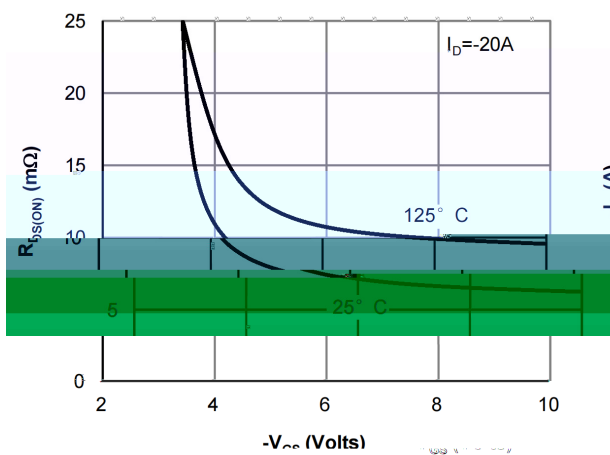
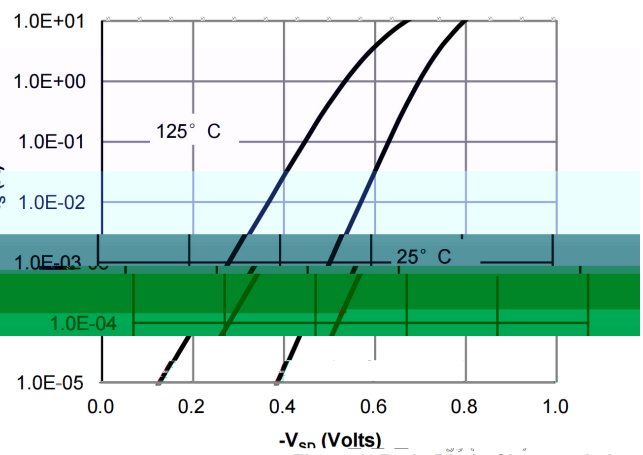
See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-30	V
Drain Current - Continuous	I_D	-16	A
Drain Current – Pulsed	I_{DM}	-65	A
Gate-Source Voltage	V_{GS}	± 20	V
Power Dissipation	P_D	3	W
Single Pulse Avalanche Energy(L=0.5mH)	E_{AS}	360	mJ
Avalanche Current(L=0.5mH)	I_{AS}	-30	A
Junction and Storage Temperature Range	T_j, T_{stg}	-55 to 150	
Thermal resistance, junction - ambient	t 10s	R_{JA}	41.7
	Steady-State		75

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=-250\text{ A}$ $V_{GS}=0V$	-30	-35		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-30V$ $V_{GS}=0V$			-1	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0V,$ $V_{GS}=\pm 20V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\text{ A}$	-1	-1.5	-2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=-10V,$ $I_D=-10A$		7.0	8	m
		$V_{GS}=-4.5V,$ $I_D=-8A$		10.3	15	
Diode Forward Voltage	V_{SD}	$I_S=-1A,$ $V_{GS}=0V$			-1.2	V
Input Capacitance	C_{iss}	$V_{DS}=-25V$ $V_{GS}=0V$ $f=1.0MHz$		3260		pF
Output Capacitance	C_{oss}			335		
Reverse Transfer Capacitance	C_{rss}			330		
Gate resistance	R_g	$V_{GS}=0V$ $V_{DS}=0V$ $f=1MHz$		5.6		
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=-10V,$ $V_{DS}=-15V,$ $I_D=-20A$		51		nC
Total Gate Charge	$Q_{g(4.5V)}$			32		
Gate Source Charge	Q_{gs}			11		
Gate Drain Charge	Q_{gd}			13		



Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=-10V$ $V_{DS}=-15V$ $R_L=0.75$ $R_{GEN}=3$		12.5		ns
Turn-On Rise Time	t_r			19		
Turn-Off Delay Time	$t_{d(off)}$			125		
Turn-Off Fall Time	t_f			67		


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

Figure 4: On-Resistance vs. Junction Temperature

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

Figure 6: Body-Diode Characteristics

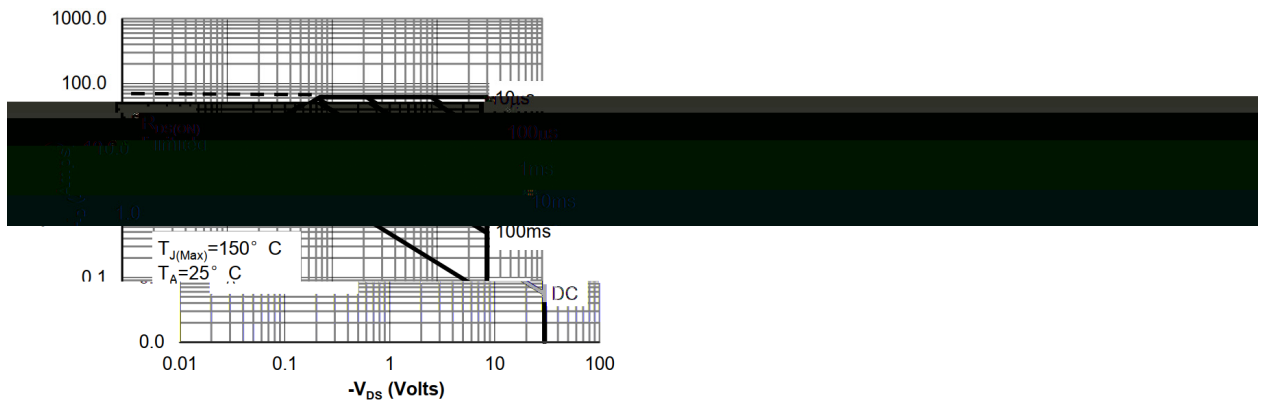
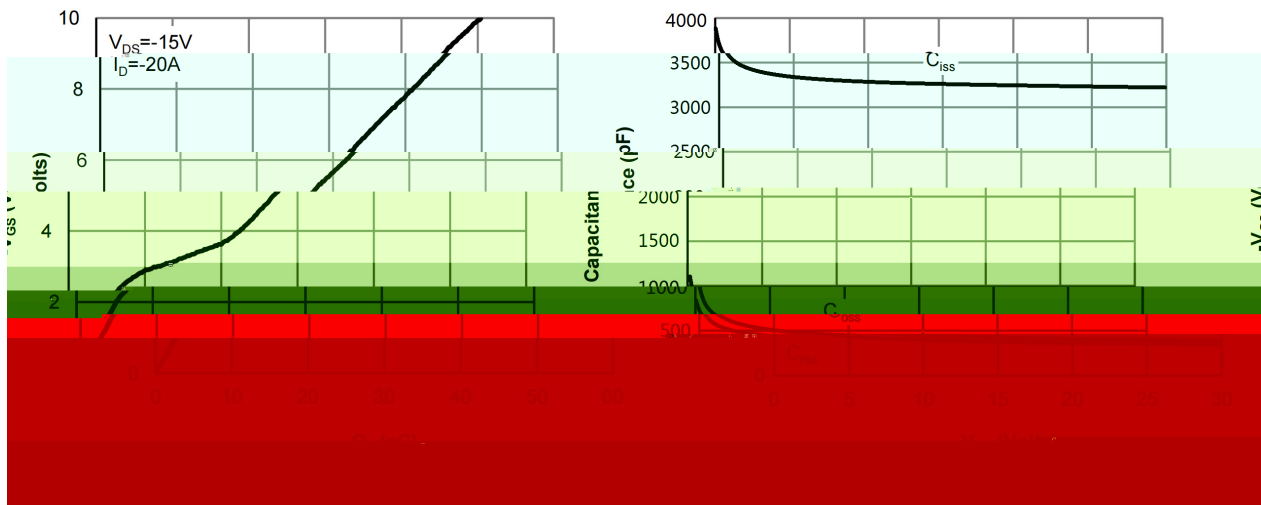
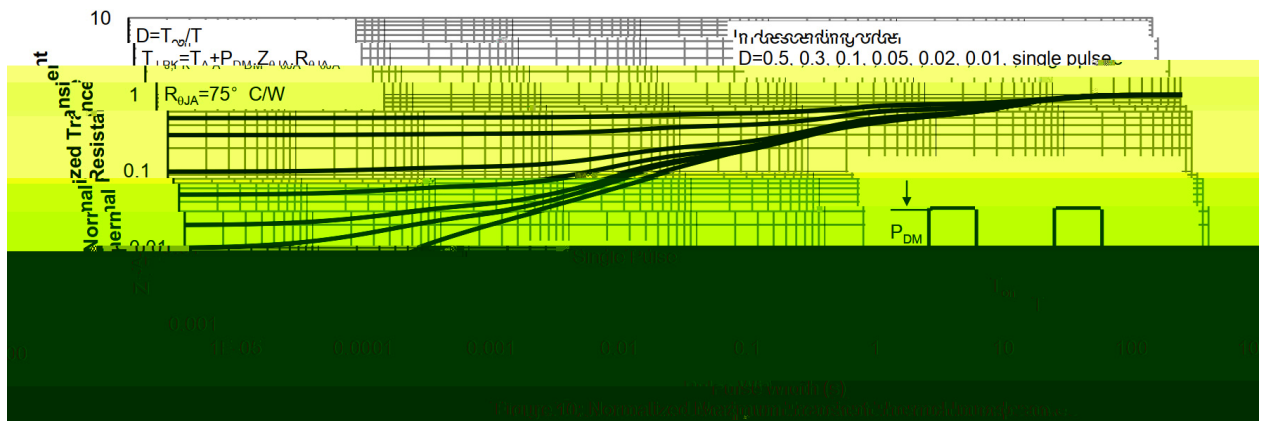
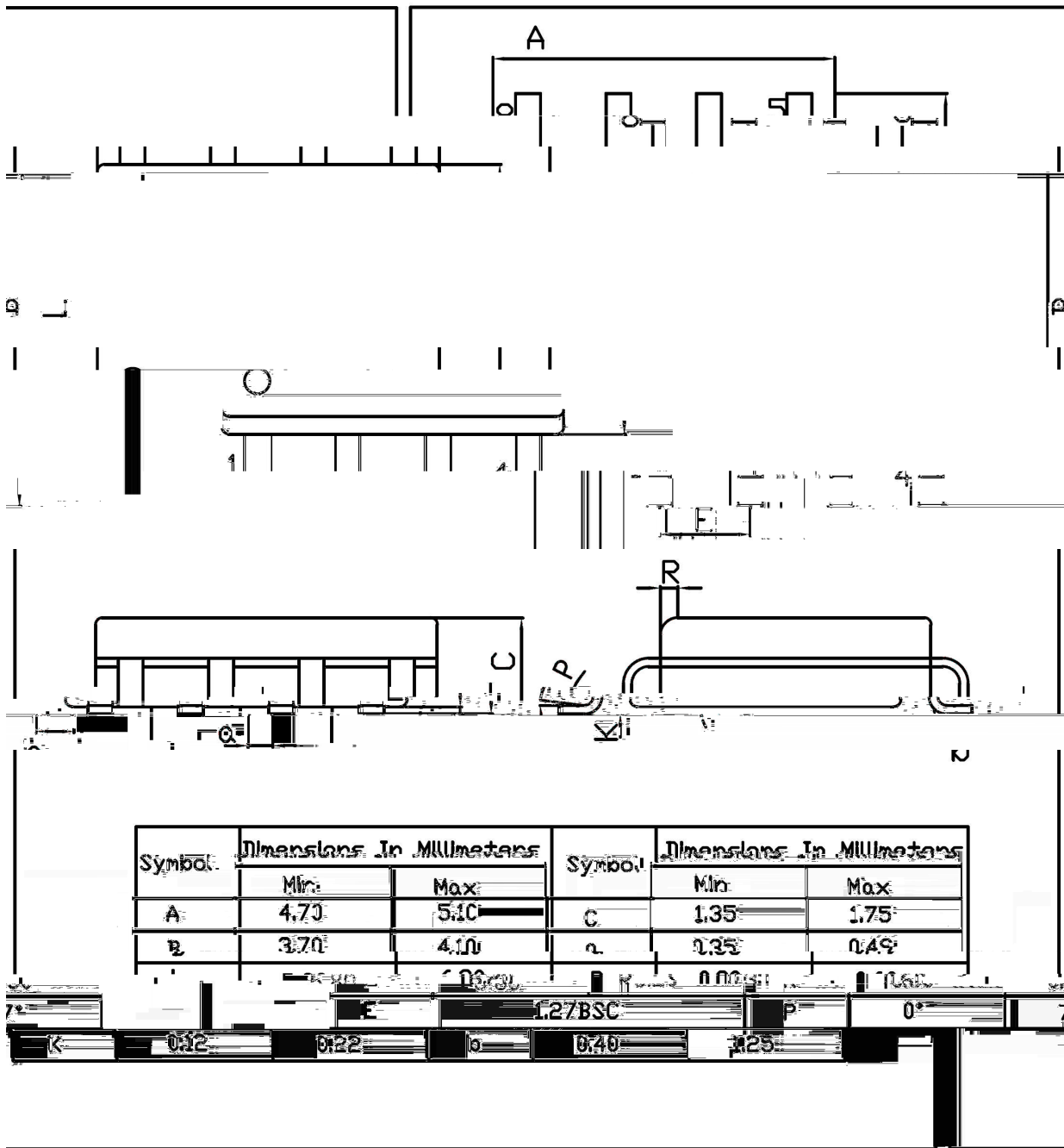
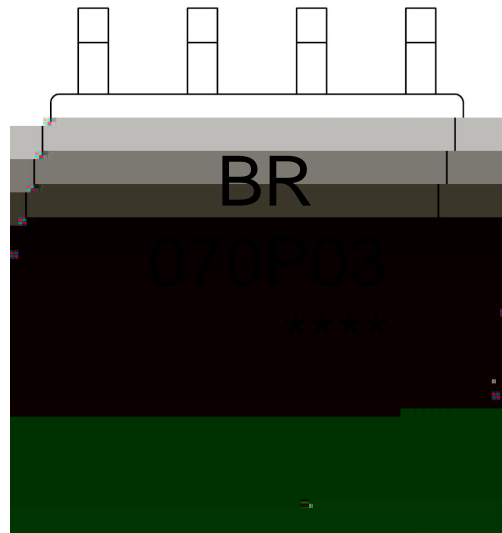


Figure 9: Maximum Forward Biased Safe Operating Area



UNIT DIMENSIONS





BR

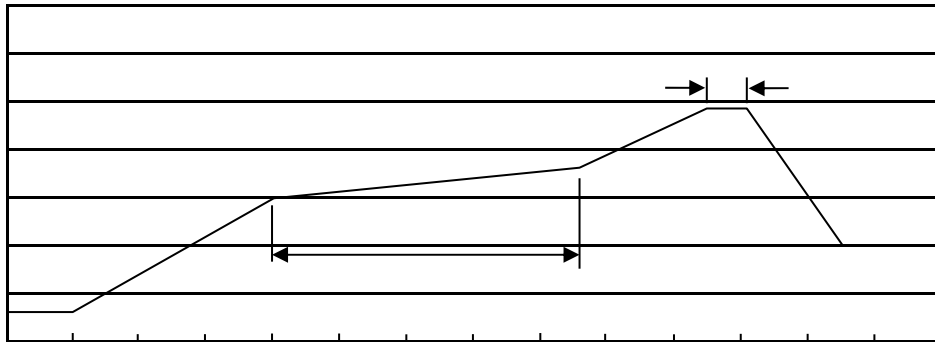
070P03

Note:

BR: Company Code

070P03: Product Type Code

****: Lot No. Code, code change with Lot No

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. |

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

/ 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
SOP/ESOP-8	4,000	2	8,000	6	48,000	13 ×12	360×360×50	380×335×366