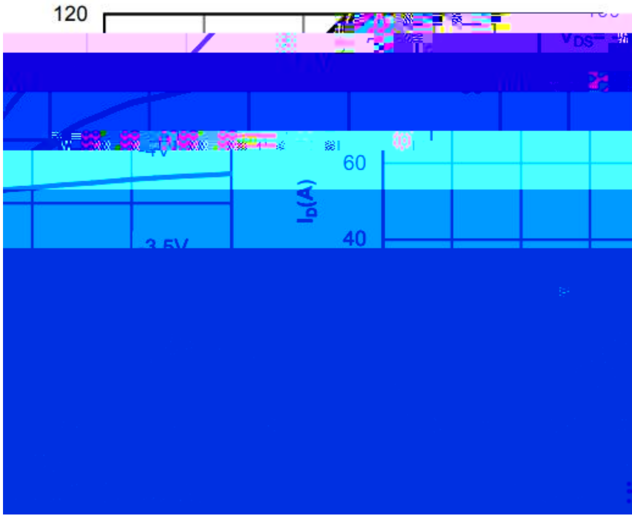
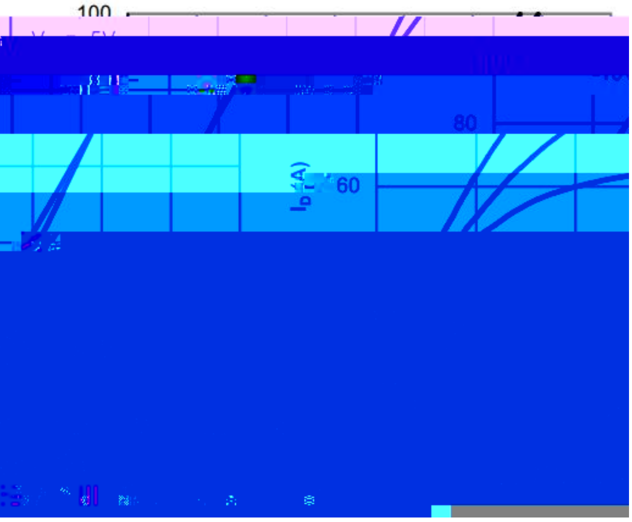
Rev.A May.-2020

VRS0; ṂṂĿ S ǒ ʆ ῷ Ẕ ᒣ
P-Channel Enhancement Mode Fielhm "

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	-40	V
Gate-Source Voltage	V_{GSS}	±20	V
Continuous Drain Current	I_D (T_a=25°C)	-10	A
Continuous Drain Current	I_D (T_a=70°C)	-8	A
Power Dissipation for Single Operation	P_D (T_a=25)	1.7	W
Power Dissipation for Single Operation	P_D (T_a=70)	1.1	W

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=-250μA	V_{GS}=0V	-40			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-40V	V_{GS}=0V			-1.0	μA
		V_{DS}=-40V T_J=55°C	V_{GS}=0V			-5.0	
Gate-Body leakage current	I_{GSS}	V_{DS}=0V	V_{GS}=±20V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}	I_D=-250μA	-1.2	-1.6	-2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=-10V	I_D=-10A		13.1	15	m
		V_{GS}=-4.5V	I_D=-7A		18	21	
Forward Transconductance	g_{FS}	V_{DS}=-5V	I_D=-10A		9.5		S
Diode Forward Voltage	V_{SD}	I_S=-1A	V_{GS}=0V		-0.8	-1.0	V
Total Gate Charge	Q_g(10V)	V_{GS}=-10V I_D=-10A	V_{DS}=-20V		42	55	nC
Total Gate Charge	Q_g(4.5V)				18.6		
Gate-Source Charge	Q_{gs}				7		
Gate-Drain Charge	Q_{gd}				8.6		
Gate Resistance	R_g	V_{GS}=0V f=1MHz	V_{DS}=0V		8.5		Ω
Input Capacitance	C_{iss}	V_{GS}=0V f=1MHz	V_{DS}=-25V		3300		pF
Output Capacitance	C_{oss}				135		
Reverse Transfer Capacitance	C_{rss}				177		
Turn-on Delay Time	$t_{d(ON)}$	V_{GS}=-10V R_L=2Ω	V_{DS}=-20V R_{GEN}=3Ω		9.4		ns
Turn-on Rise Time	t_r				20		
Turn-off Delay Time	$t_{d(OFF)}$				55		
Turn-off Fall Time	t_f				30		





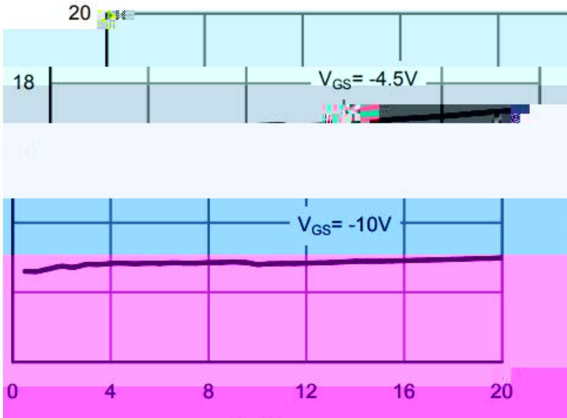


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

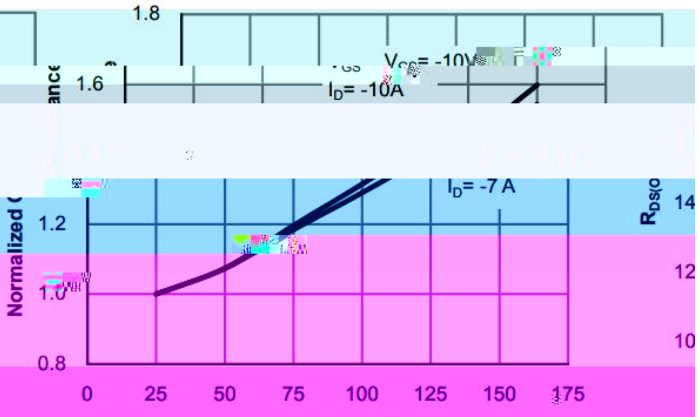


Figure 4: On-Resistance vs. Junction Temperature

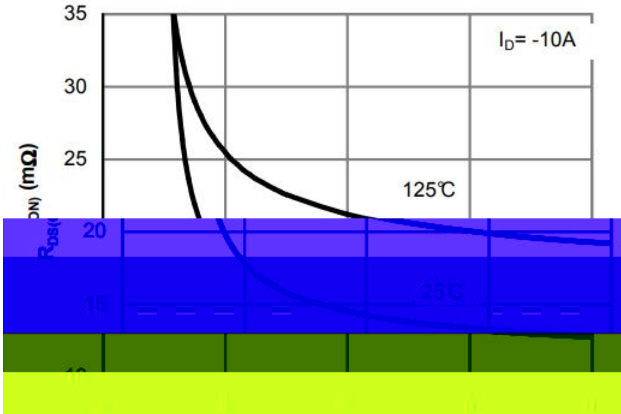
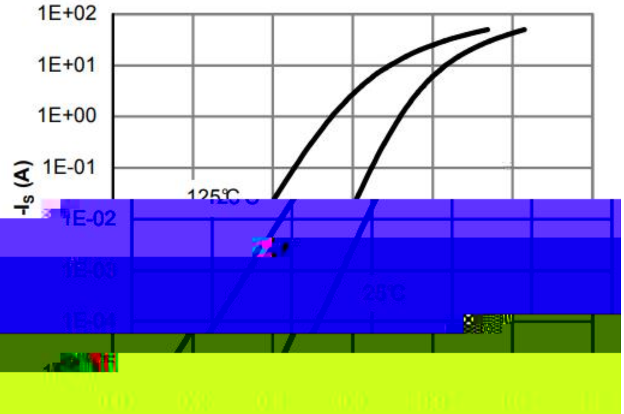
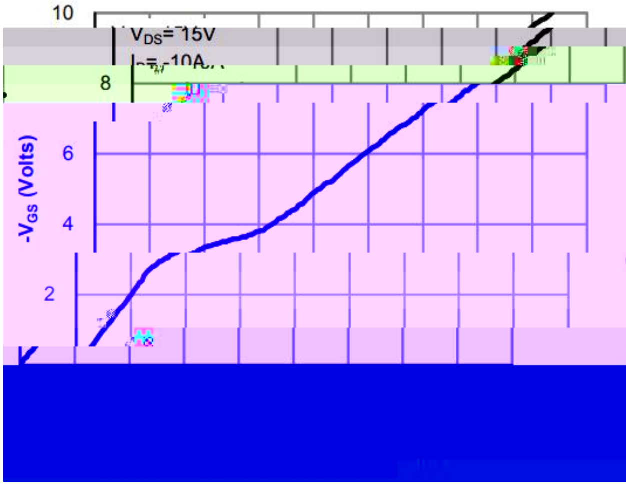
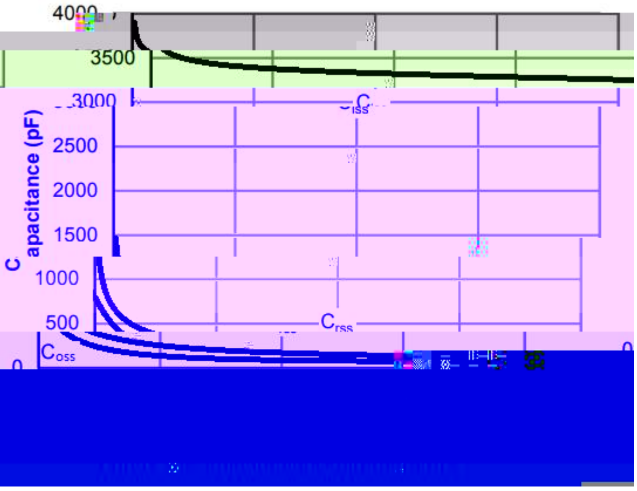
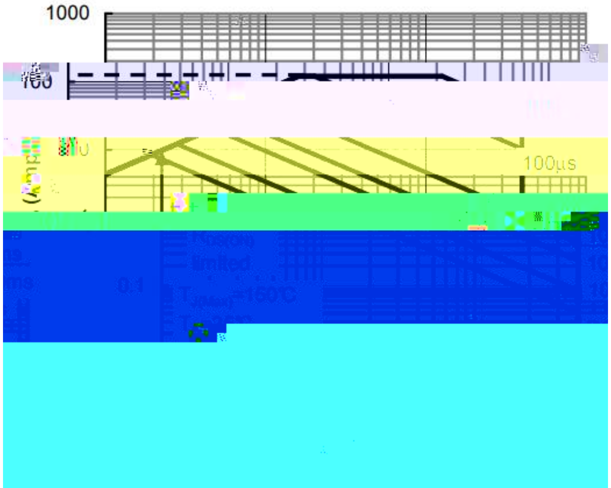


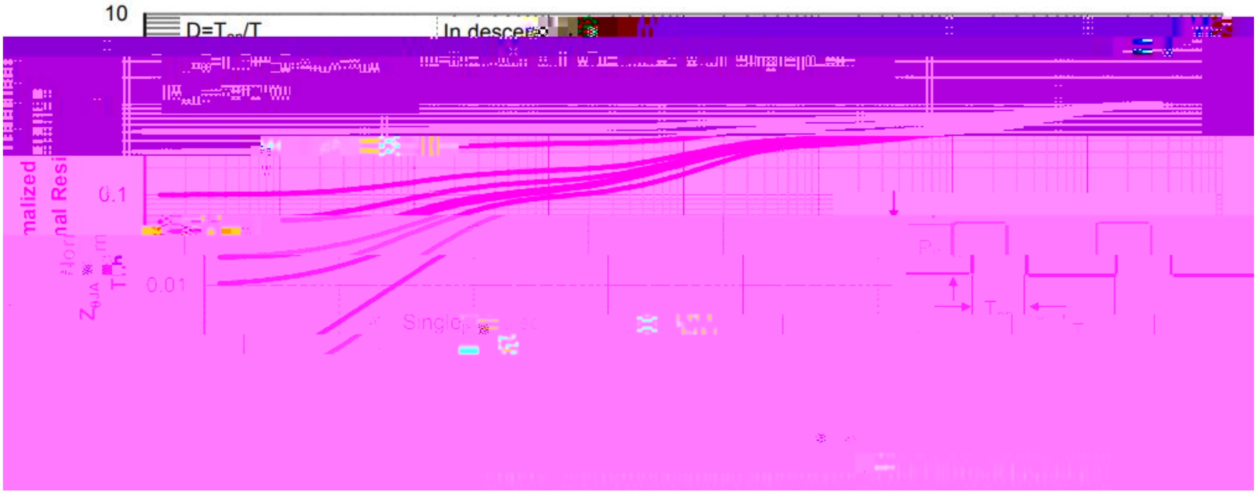
Figure 5: On-Resistance



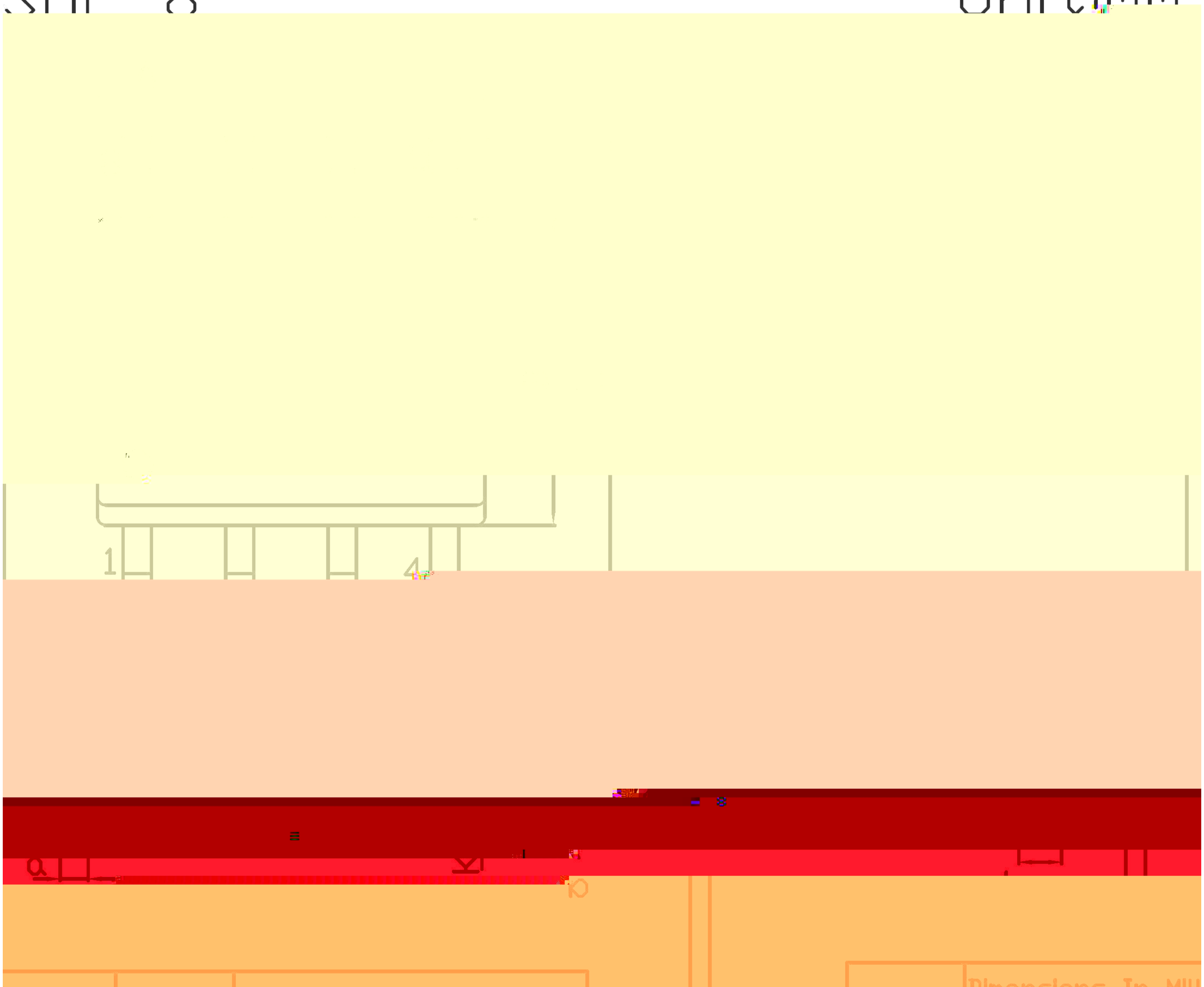

10
V_{DS}=-15V
I_D=-10A
8
6
4
2
$-V_{GS}$ (Volts)


4000
3500
3000
2500
2000
1500
1000
500
0
C_{iss}
C_{rss}
C_{oss}
Capacitance (pF)


1000
100
10
100µs
0.1
limited
$T_{J(Max)}$=150°C

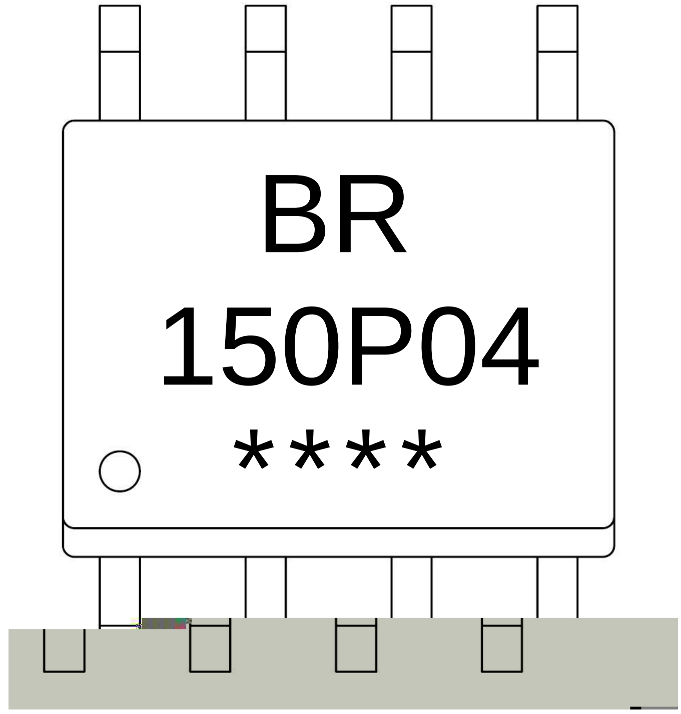

10
D=T_{on}/T
In descending
0.1
0.01
Single
malized
nal Resi
$Z_{\theta JA}$
P_D
T_{on}

SOP-8 Unit:mm



6.20	R	0.30	0.60
SC	P	0°	7°

L	5.80
E	1.27B



ب ˝ χ

BR χ	ҥӂ ३ ᴻ Ꮒ
150P04 χ	ҥӂ ʒ ᴺ Ꮒ
**** χ	ҥӂ ·ǀ ғ ή̋ ᴺ Ꮒ ι ҩ ·ǀ ғ ή̋ ᴺ ψ ק

Note:

BR:	Company Code.
150P04:	Product Type
****:	Lot No. Code, code change with Lot No.

ب ˝ χ
1 ĺ ♬ □ ŷ 150 Ḱ 180 ƚ ı `H ڑ 60 Ḱ 90sec;
2 Ś Ö □ ŷ 245 ° 5 ƚ ı `H ڑ 'Y ﾊ ᄥ 5 ° 0.5sec;
3 ì ˙ ˥ ˛ ɔ ﻬ ŷ ᄥ 2 Ḱ 10 ƚ /sec.

Note:
1.Preheating:150~180 ƚ , Time:60~90sec.
2.Peak Temp.:245 ° 5 ƚ , Duration:5 ° 0.5sec.
3. Cooling Speed: 2~10 ƚ /sec.

□ ŷ χ 260 ° 5 ƚ `H ڑ χ 10 ° 1 sec.

Temp.:260±5 Time:10±1 sec

ค ` γ ŀ / REEL

Package Type	Units					Dimension		(unit mm³)
	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		8,000	6	,000		360×360×50	380×335