

/ Descriptions

SOP-8 P MOS

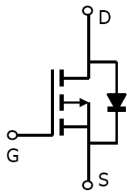
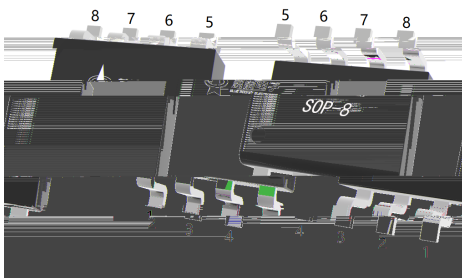
P-Channel Enhancement Mode Field Effect Transistor in a SOP-8 Plastic Package.

/ Features $V_{DS} (V) = -40V$ $I_D = -6.8A$ ($V_{GS} = \pm 20V$) $R_{DS(ON)}@-10V \leq 35m\Omega$ (Typ. 33m Ω) $R_{DS(ON)}@-4.5V \leq 60m\Omega$ (Typ. 40m Ω)

HF Product.

/ Applications

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

/ Equivalent Circuit**/ Pinning**

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

/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

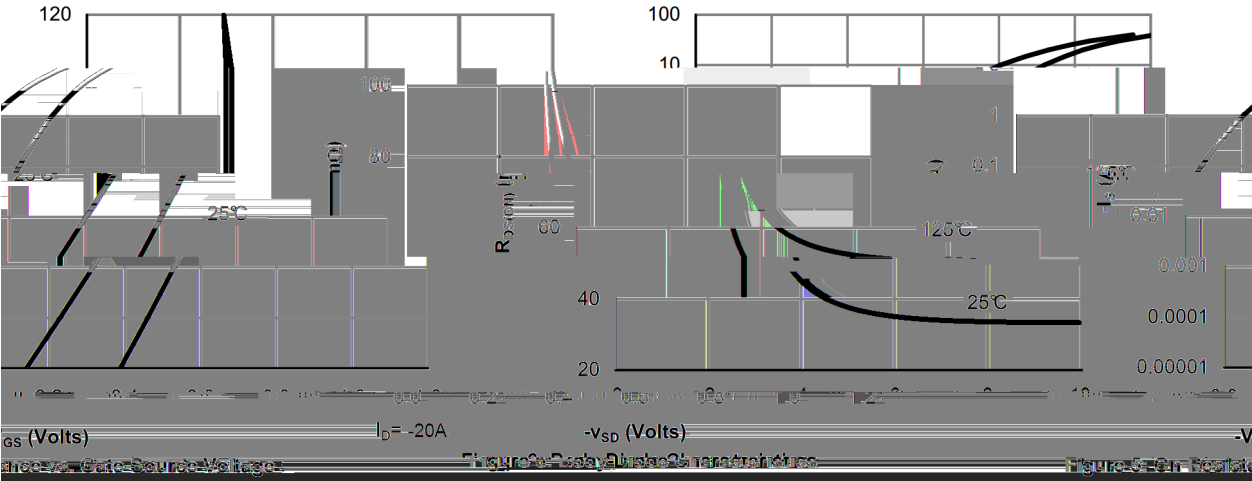
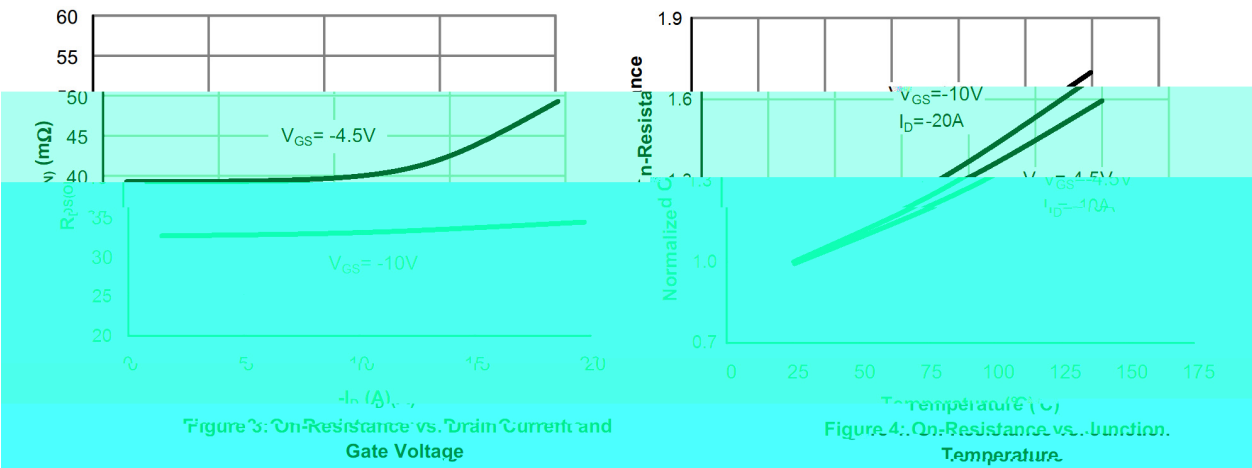
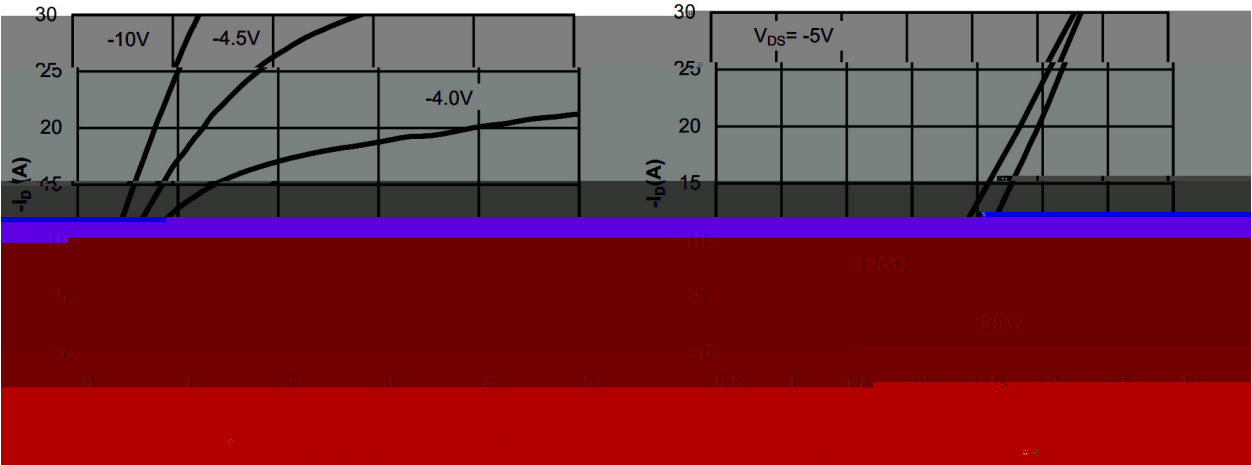
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-40	V
Drain Current		I_D	-6.8	A
Drain Current - Pulsed		I_{DM}	-30	A
Gate-Source Voltage		V_{GS}	± 20	V
Avalanche Current		I_{AS}	13	A
Single Pulsed Avalanche Energy L=0.5mH		E_{AS}	54	mJ
Power Dissipation		P_D	2.7	W
Storage Temperature Range		T_{stg}	-55 150	
Thermal Resistance-Junction to Ambient	$t \leq 10s$	$R_{\theta JA}$	46	/W
	Steady-State		80	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$V_{GS}=0V$ $I_D=-250\mu A$	-40	-46		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-40V$ $V_{GS}=0V$			1.0	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu A$	-1.0	-1.4	-2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V$ $I_D=-20A$		33	35	m Ω
		$V_{GS}=-4.5V$ $I_D=-10A$		40	60	
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=-1A$			-1.2	V
Gate resistance	R_g	$V_{GS}=0V$ $V_{DS}=0V$, $f=1MHz$		9.5		Ω
Input Capacitance	C_{iss}	$V_{DS}=-25V$ $V_{GS}=0V$ $f=1.0MHz$		1500		pF
Output Capacitance	C_{oss}			620		
Reverse Transfer Capacitance	C_{rss}			440		
Total Gate Charge	$Q_{g(-10V)}$	$V_{GS}=-10V$ $V_{DS}=-20V$ $I_D=-12A$		16.5		nC
Total Gate Charge	$Q_{g(-4.5V)}$			7.8		
Gate Source Charge	Q_{gs}			4.2		
Gate Drain Charge	Q_{gd}			3.8		

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	t					

/ Electrical Characteristic Curve



/ Electrical Characteristic Curve

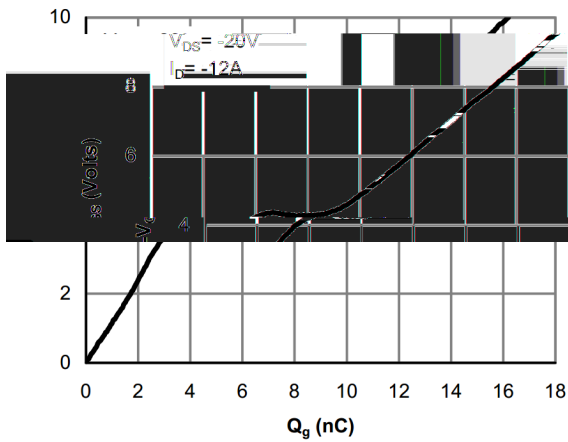


Figure 7: Gate-Charge Characteristics

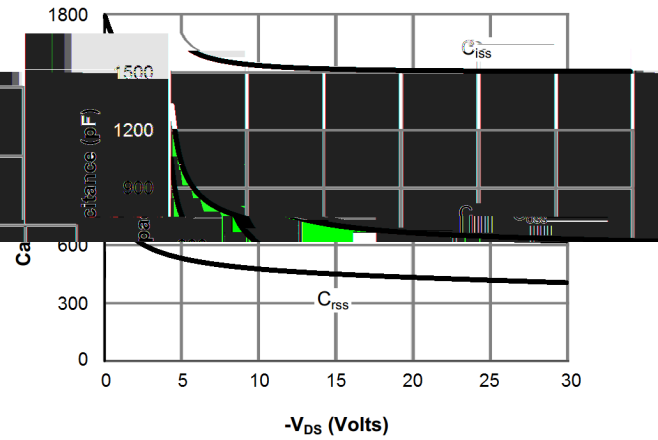


Figure 8: Capacitance Characteristics

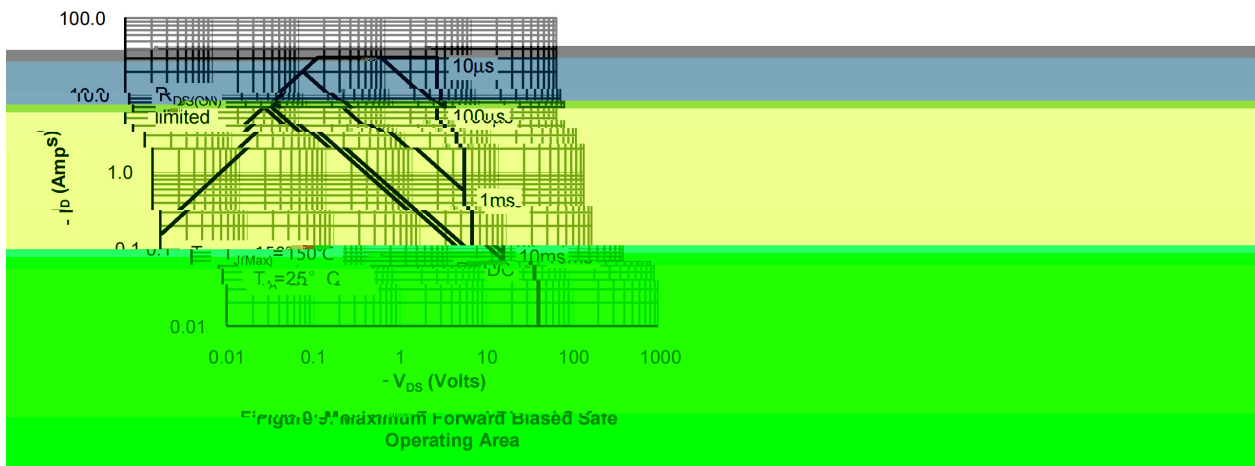


Figure 9: Maximum Forward Biased Safe Operating Area

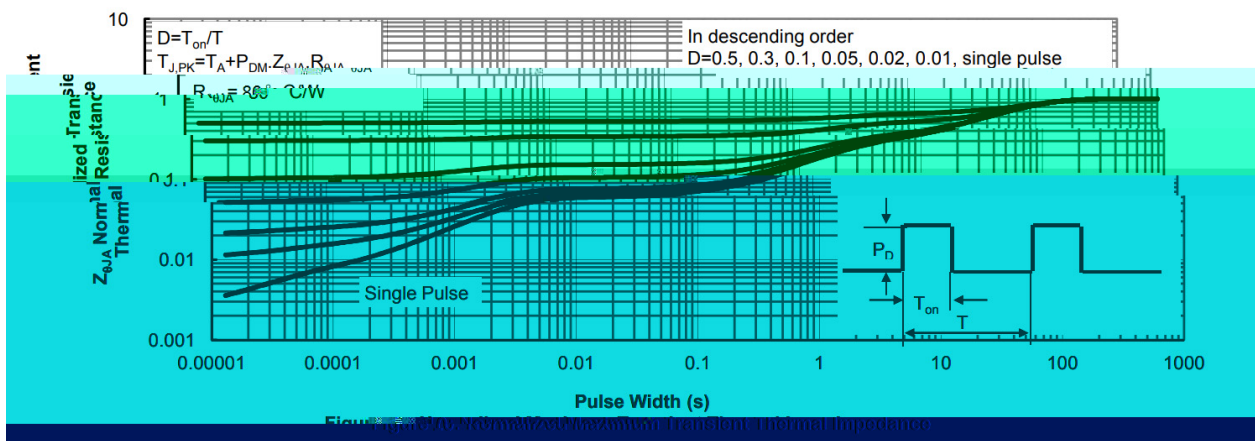
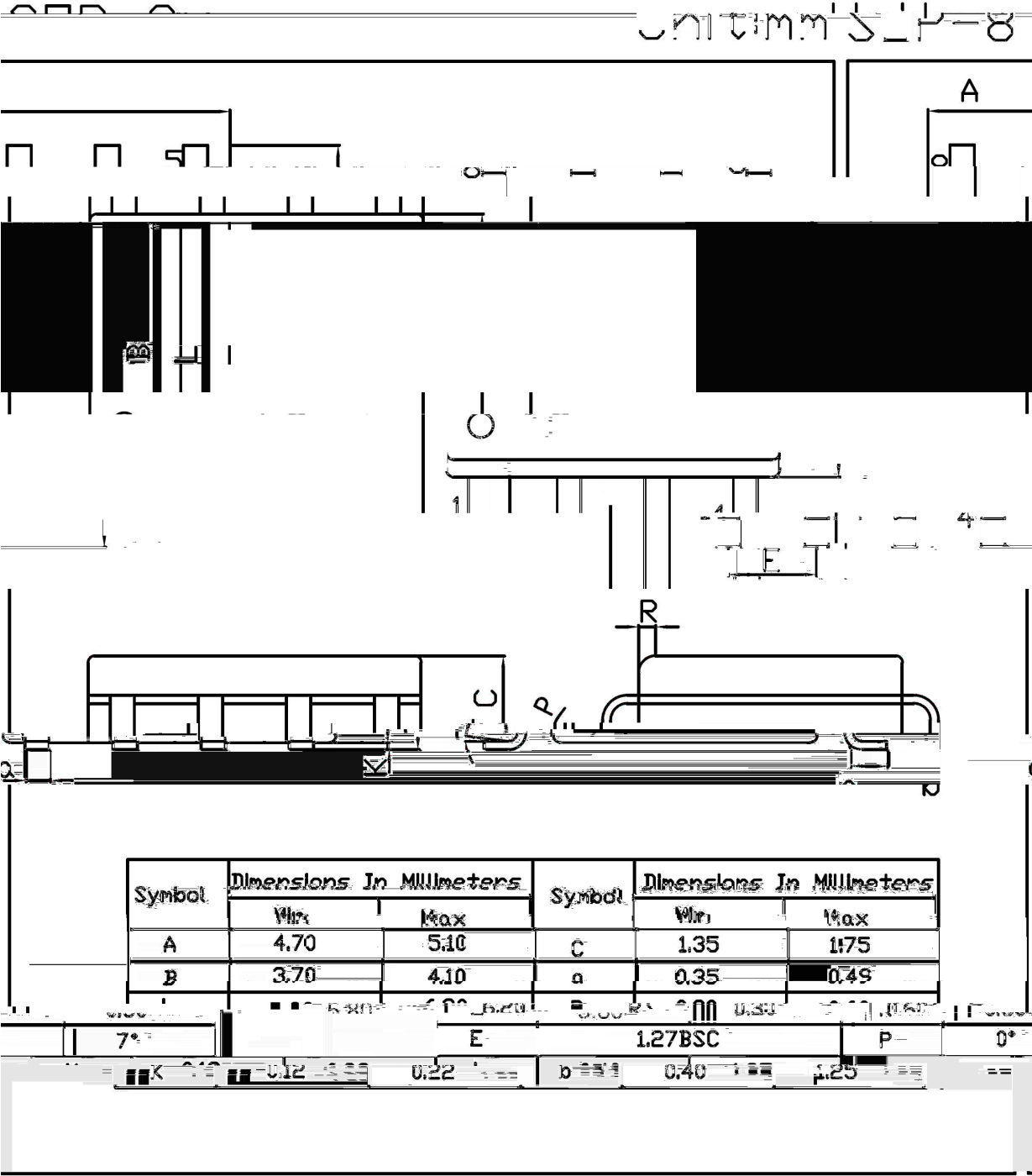


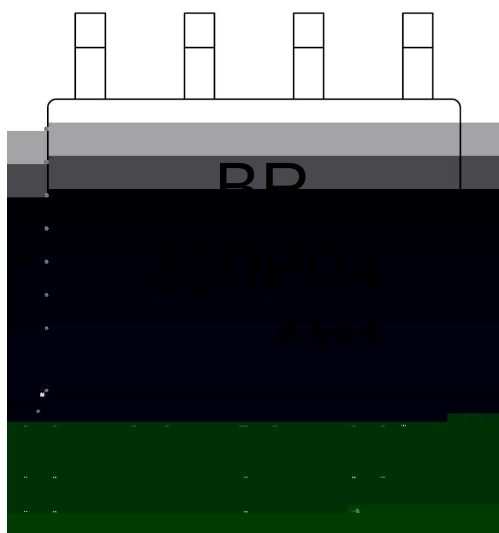
Figure 10: Maximum Transient Thermal Impedance

/ Package Dimensions





/ Marking Instructions



BR

350P04

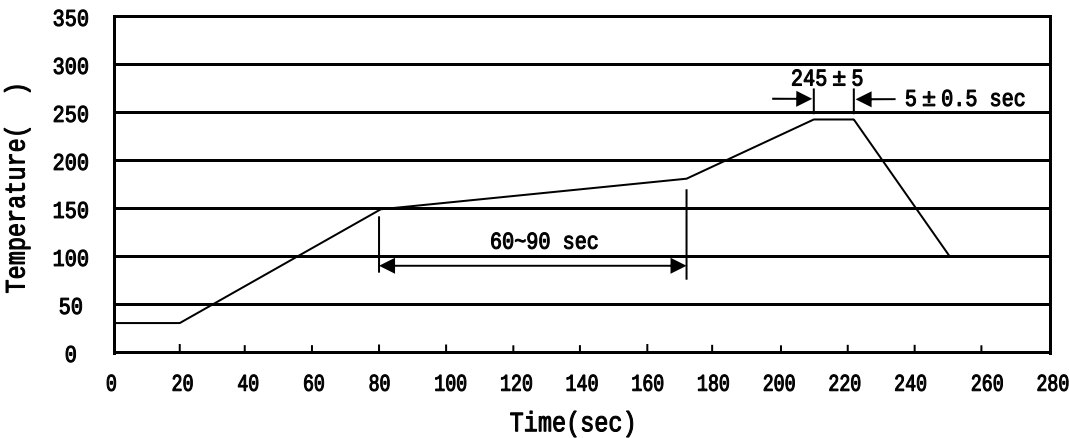
Note:

BR: Company Code

350P04: 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 °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
SOP/ESOP-8	4,000	2	8,000	6	48,000	13 ×12	360×360×50	380×335×366

/ Notices