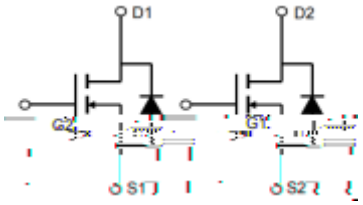
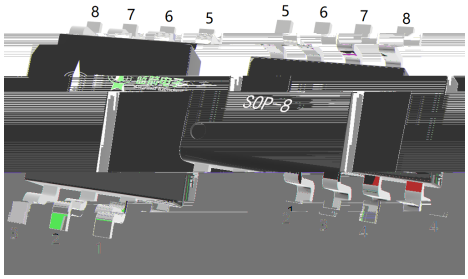
SOP-8 N MOS
Double N-CHANNEL MOSFET in a SOP-8 Plastic Package.

V_{DS}(V)=30V I_D=7.5A
$R_{DS(ON)}$@10V<25m (Typ. 20mR)
$R_{DS(ON)}$@4.5V<40m (Typ. 28mR)
HF Product.

MB/NB/UMPC/VGA , DC-DC ,
High Frequency Point-of-Load Synchronous Buck Converter for MB/NB/UMPC/VGA, Networking DC-DC Power System,Load Switch.





PIN1 S1 PIN 2

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D (T_C=25)	7.5	A
Pulsed Drain Current	I_{DM}	43	A
Power Dissipation	P_D (T_C=25)	2.5	W
Junction and Storage Temperature Range	T_J,T_{STG}	-55 to +150	
Maximum Junction-to-Ambient	R_{JA}(Steady-State)	90	/W
Maximum Junction-to-Case	R_{JC}(Steady-State)	50	/W

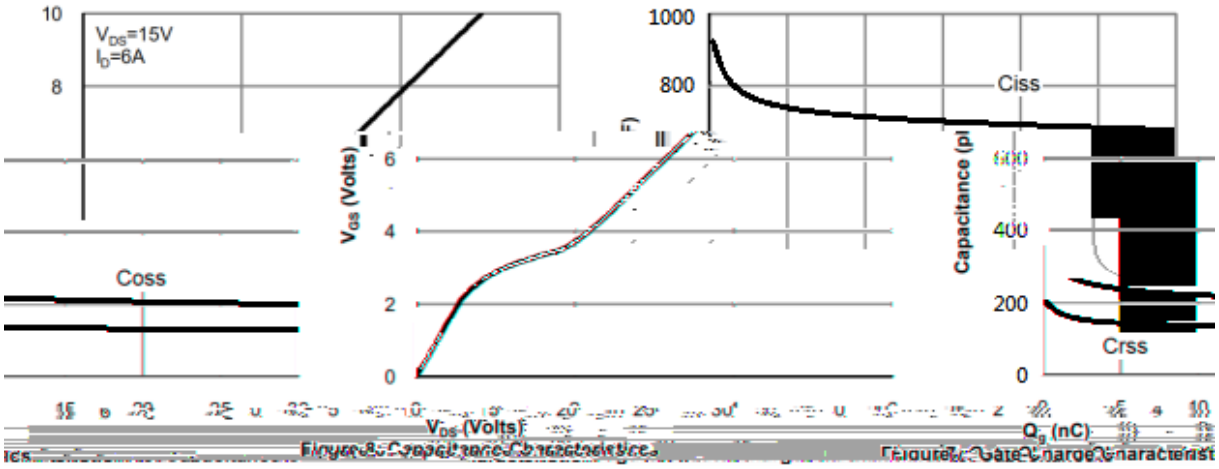
/ Electrical Characteristics(Ta=25)

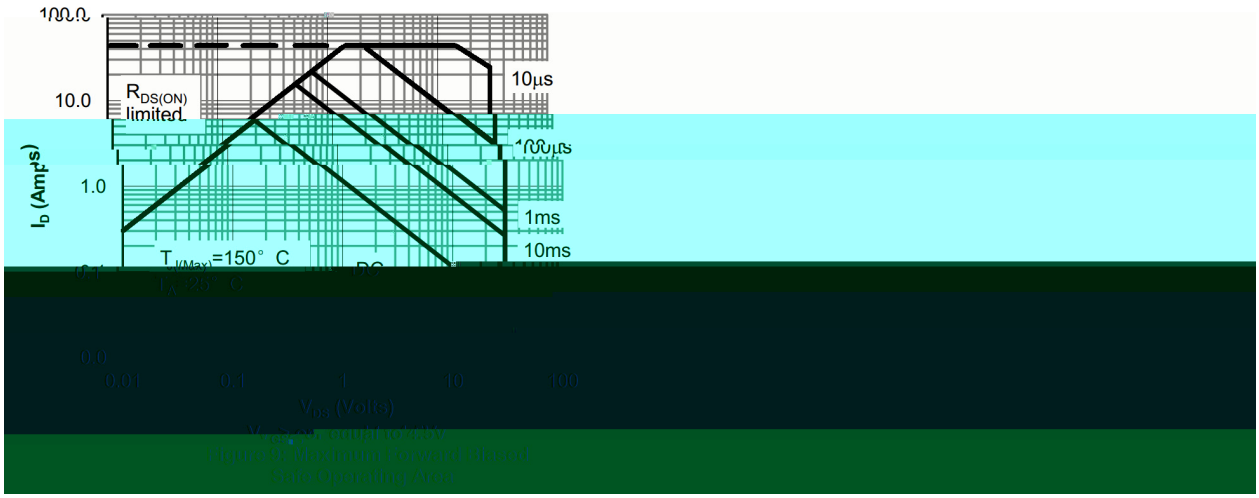
Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V	I_D=250 A	30	34		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V	V_{GS}=0V			1.0	A
Gate-Body leakage current	I_{GSS}	V_{GS}=±20V	V_{DS}=0V			100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}	I_D=250 A	1.0	1.7	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V	I_D=6.9A		20	25	m
		V_{GS}=4.5V	I_D=5.0A		28	40	m
Diode Forward Voltage	V_{SD}	V_{GS}=0V	I_S=1.0A			1.2	V
Input Capacitance	C_{iss}	V_{DS}=25V f=1.0MHz	V_{GS}=0V		690		pF
Output Capacitance	C_{oss}				200		pF
Reverse Transfer Capacitance	C_{rss}				130		pF
Gate resistance	R_g	V_{DS}=0V f=1.0MHz	V_{GS}=0V		2.7		Ω
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V I_D=6A	V_{DS}=15V		5.2		nC
Total Gate Charge	$Q_{g(4.5V)}$				2.5		nC
Gate-Source Charge	Q_{gs}				0.8		nC
Gate-Drain Charge	Q_{gd}				1.3		nC

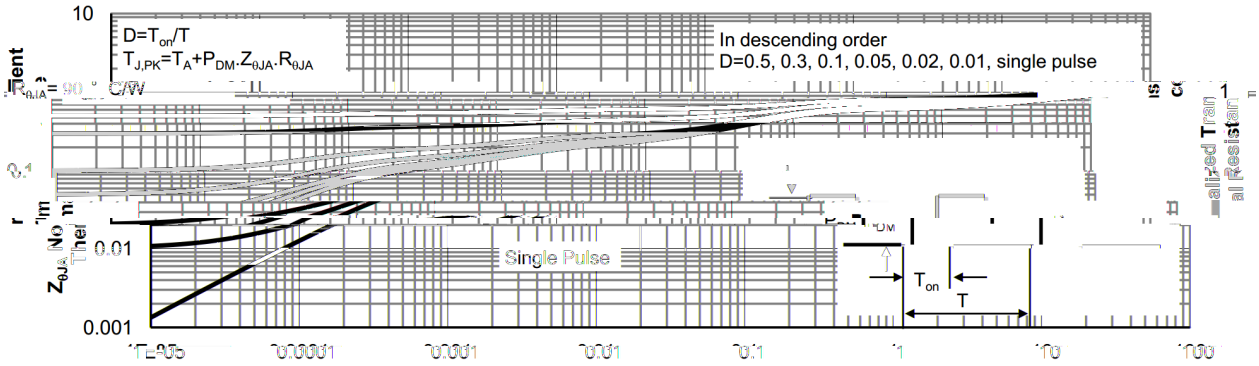
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	V_{DS}=15 V V_{GS}=10V R_L=2.5 R_{GEN}=3		4.5		ns
Turn-On Rise Time	t_r			2.5		ns
Turn-Off Delay Time	$t_{d(off)}$			14.5		ns
Turn-Off Fall Time	t_f			3.5		ns

/ Electrical Characteristic Curve



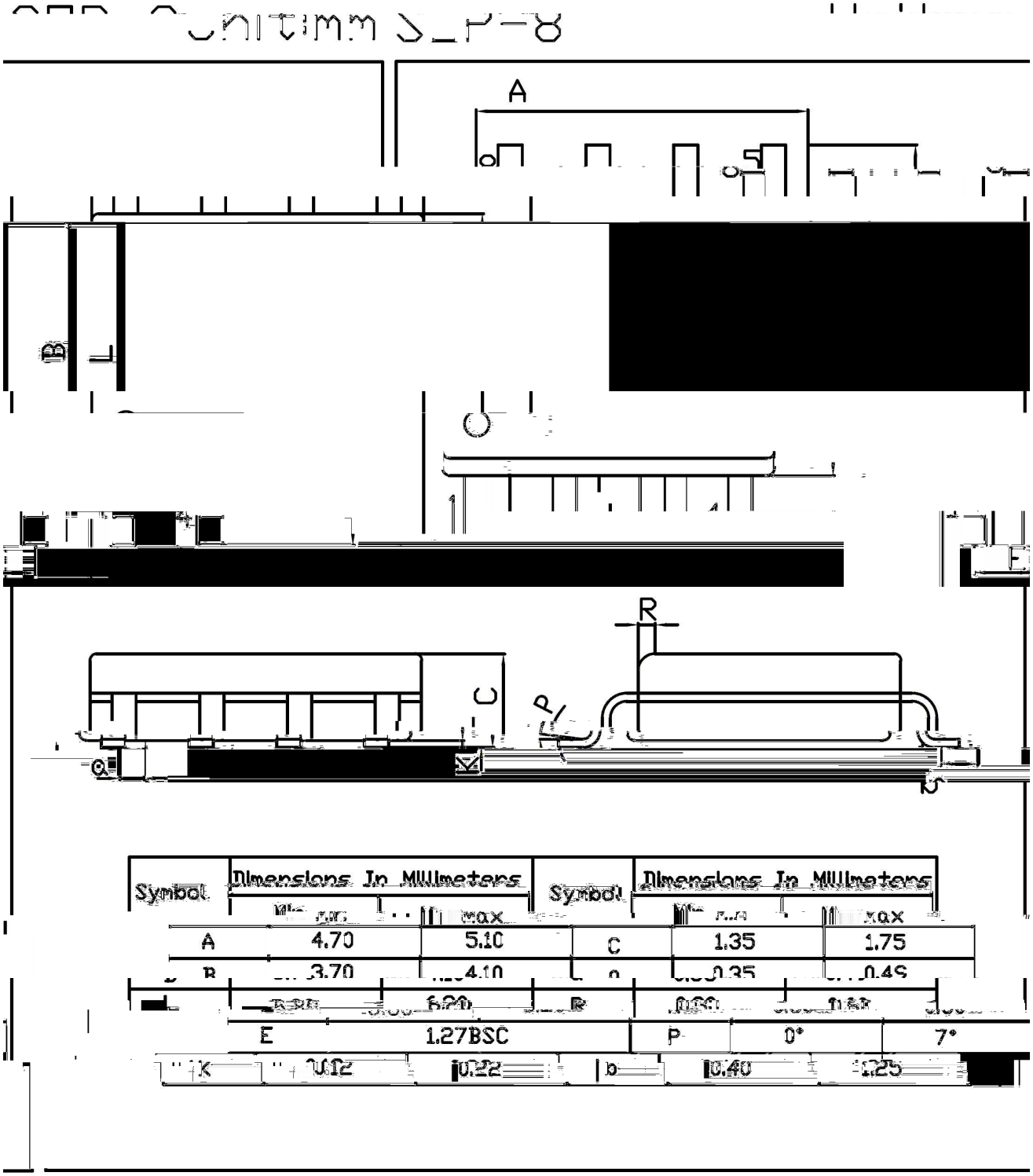




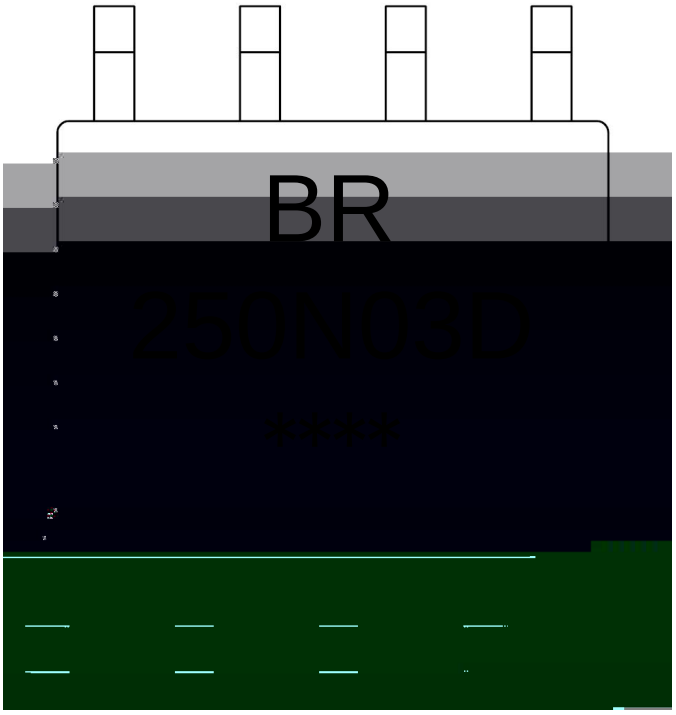
Pulse Width (s)

Figure 10: Normalized Maximum Transient Thermal Impedance

/ Package Dimensions



/ Marking Instructions



BR

250N03D

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Note:

BR:	Company Code
250N03D:	Product Type
****:	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.

/ 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 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	2	8,000	6	48,000	13		