Complementary Enhancement MOSFET in a SOP-8 Plastic Package.

N-channel
V_{DS}(V)=40V I_D=15A
$R_{DS(ON)}$@10V<9mΩ

P-channel
V_{DS}(V)=-40V I_D=-11A

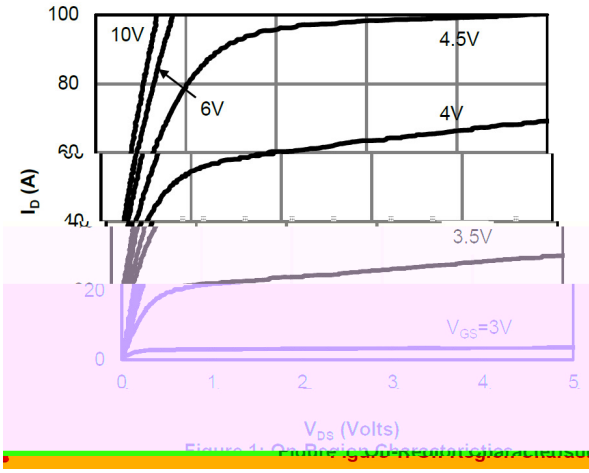
/ Absolute Maximum Ratings(Ta=25)

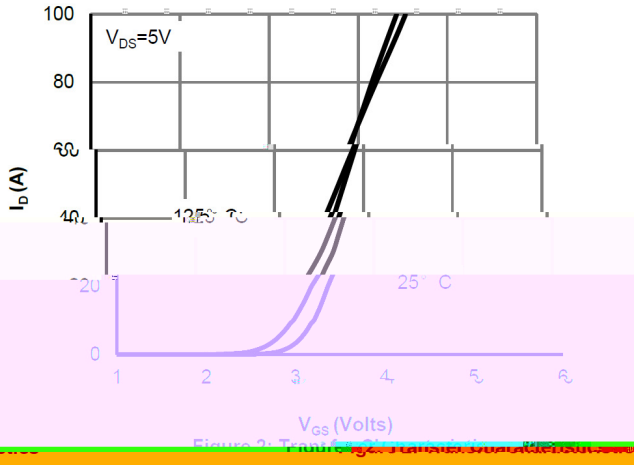
Parameter	Symbol	Rating		Unit
		N-channe	P-channell	
Drain-Source Voltage	V_{DSS}	40	-40	V
Gate-Source Voltage	V_{GSS}	±20		V
Continuous Drain Current	I_D	15	-11	A
Pulsed Drain Current	I_{DM}	49	-35	A
Power Dissipation	P_D	3.5	3	W
Junction and Storage Temperature Range	T_J,T_{STG}	-55 to +150		
Maximum Junction-to-Ambient	$R_{\theta JA}$	90		/W

N- /N-CHANNEL Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V	I_D=250μA	40	47		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=40V	V_{GS}=0V			1.0	μA
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=250μA	1.0	1.6	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V	I_D=10A		8	9	mΩ
		V_{GS}=4.5V	I_D=5A		10	15	mΩ
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		850		pF
Output Capacitance	C_{oss}				115		pF
Reverse Transfer Capacitance	C_{rss}				30		pF
Gate resistance	Rg	V_{DS}=0V f=1.0MHz	V_{GS}=0V		2.4		
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V I_D=10A	V_{DS}=20V		21		nC
Total Gate Charge	$Q_{g(4.5V)}$				8.6		nC
Gate-Source Charge	Q_{gs}				5.7		nC
Gate-Drain Charge	Q_{gd}				3		nC
Turn-On Delay Time	$t_{d(on)}$	V_{DS}=20 V R_L=1.0Ω	V_{GS}=10V R_{GEN}=3Ω		7.5		ns
Turn-On Rise Time	t_r				2.1		ns
Turn-Off Delay Time	$t_{d(off)}$				23		ns
Turn-Off Fall Time	t_f				3		ns

N- / N-CHANNEL Electrical Characteristic Curve





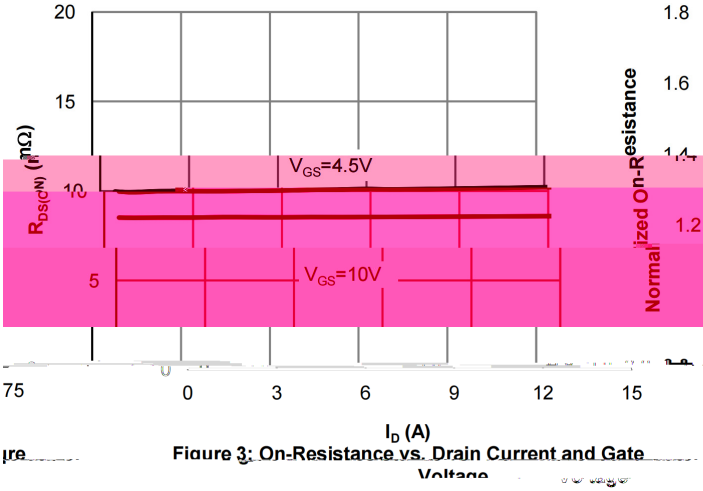


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

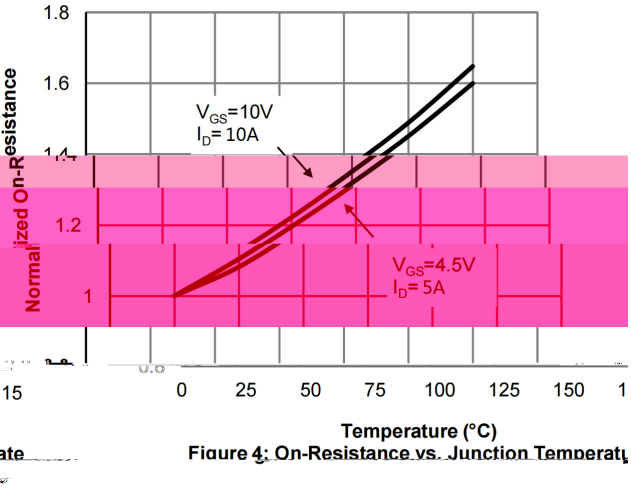


Figure 4: On-Resistance vs. Junction Temperature

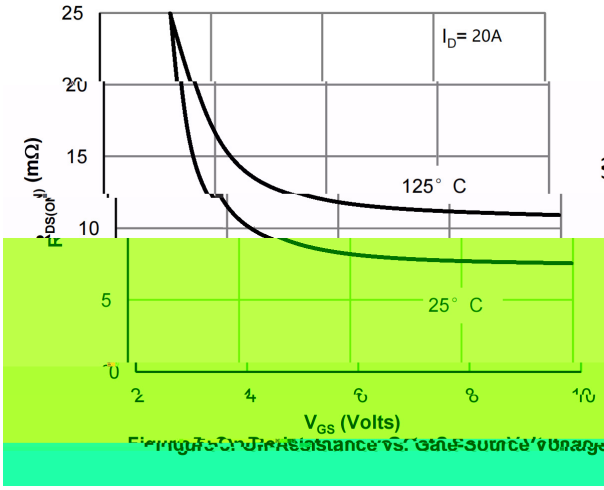


Figure 5: On-Resistance vs. Gate-Source Voltage

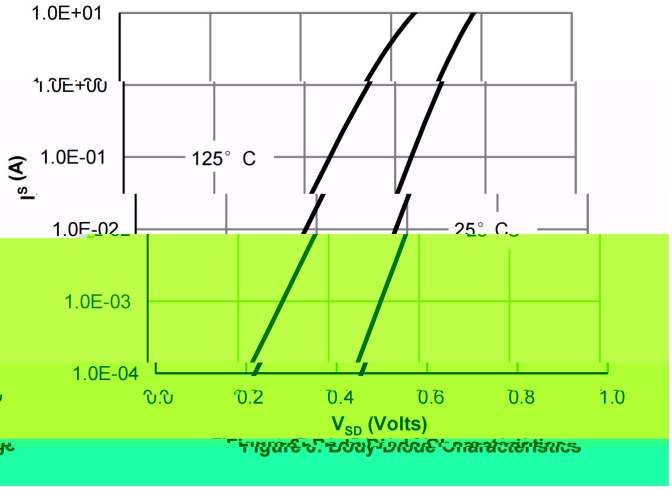
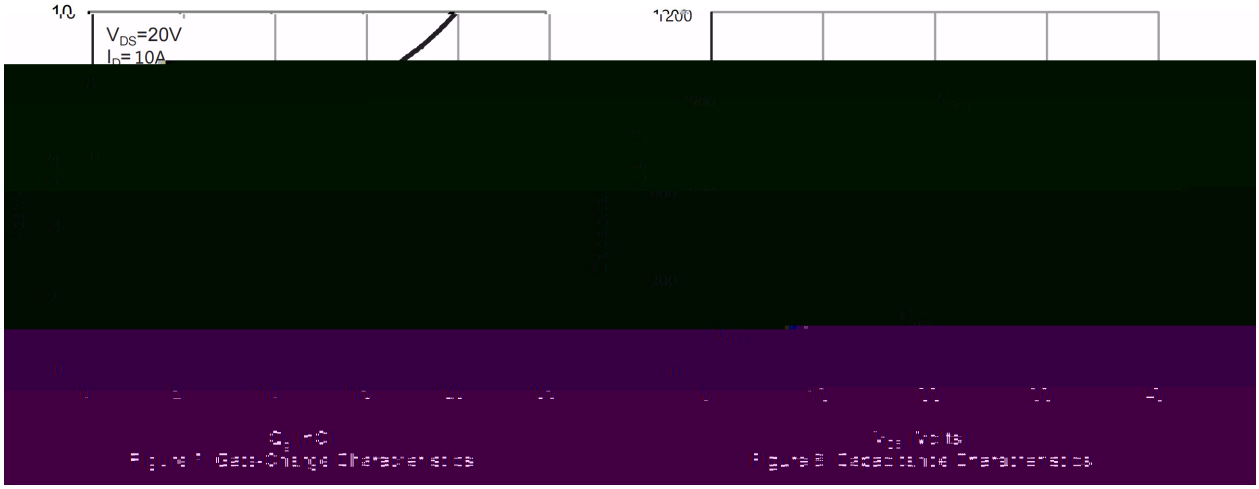


Figure 6: Body-Diode Characteristics

N- / N-CHANNEL Electrical Characteristic Curve



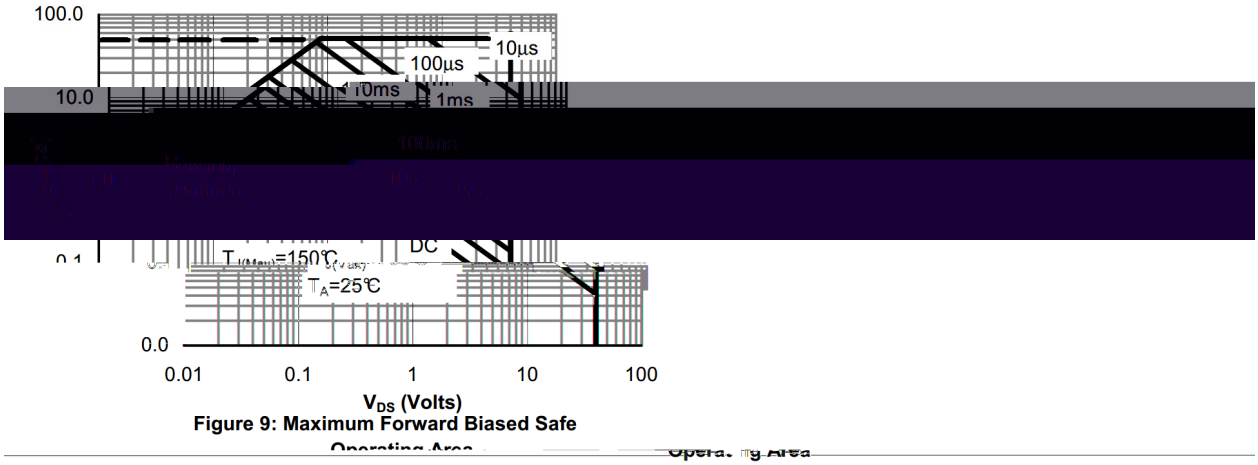


Figure 9: Maximum Forward Biased Safe Operating Area

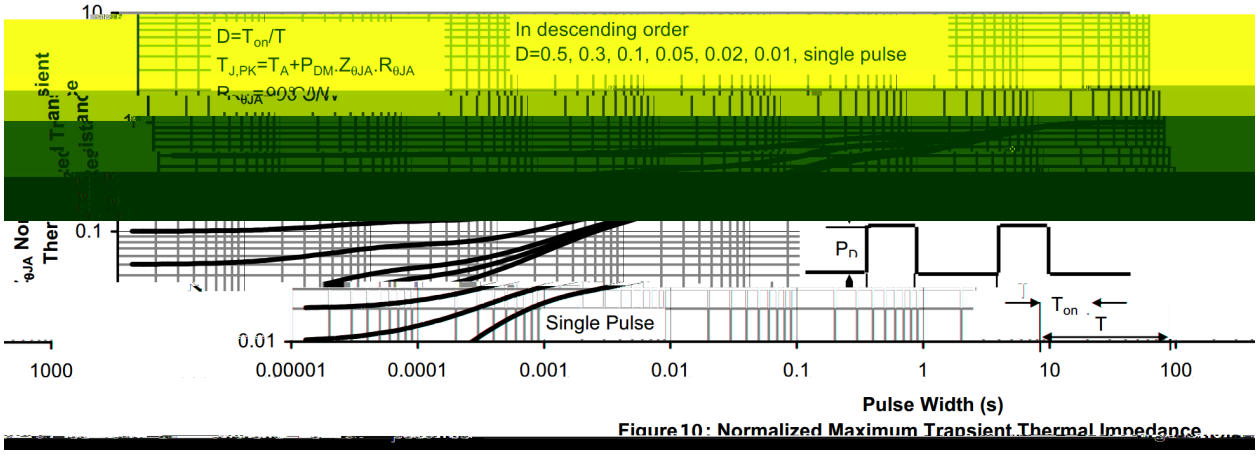
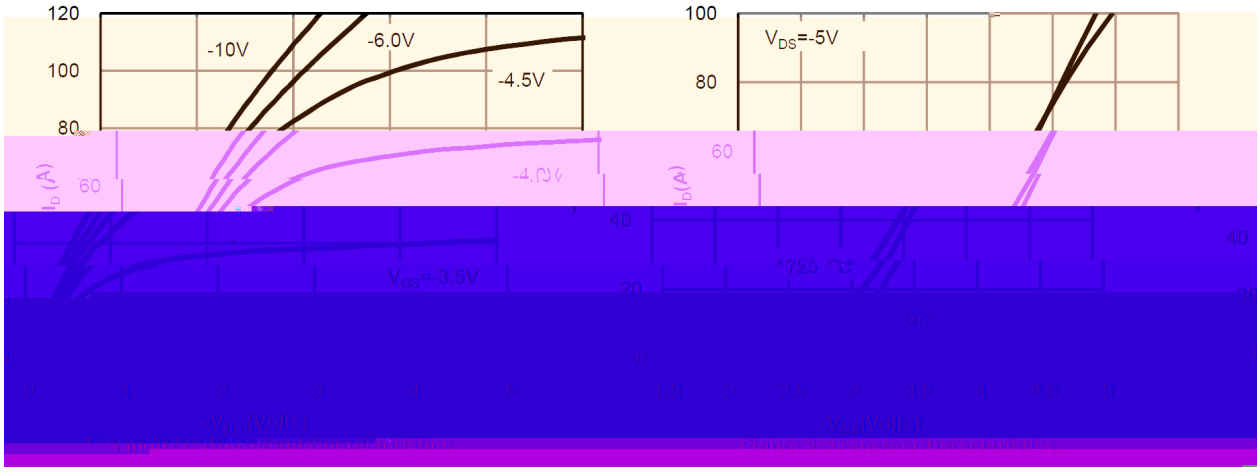
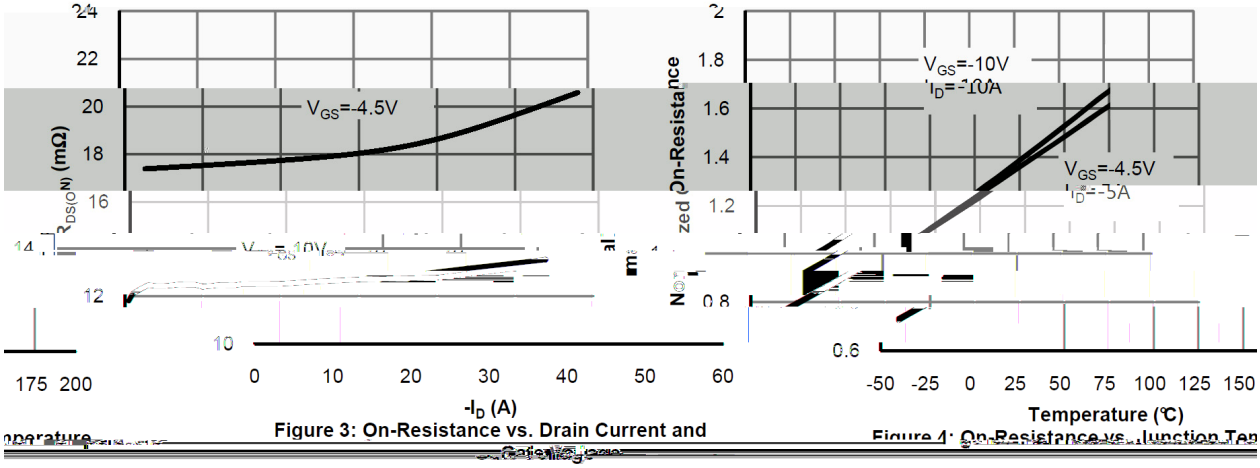


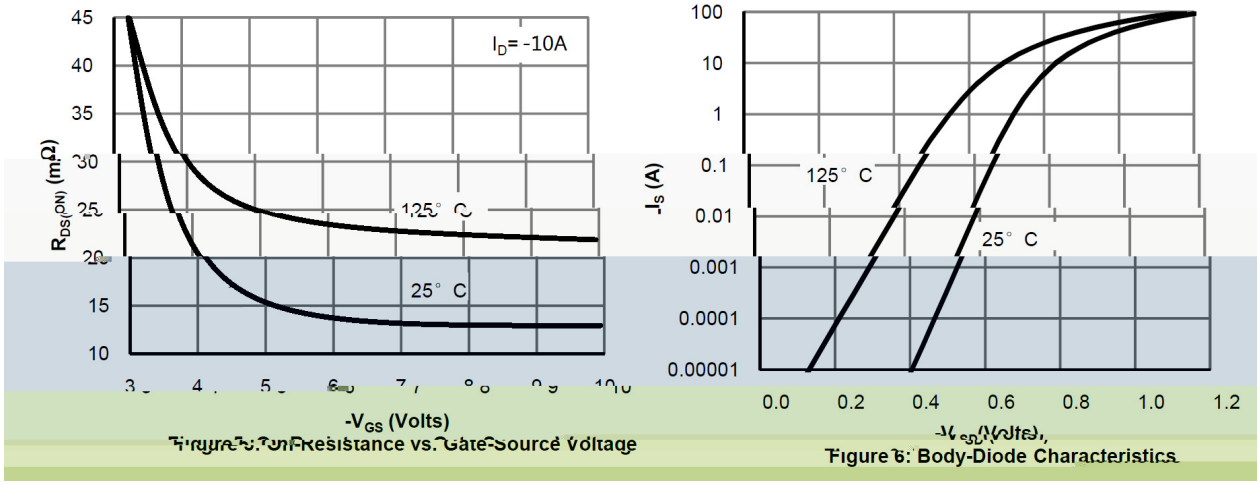
Figure 10: Normalized Maximum Transient Thermal Impedance

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=-250μA	-40	-45		V
Zero Gate Voltage Drain Current	I_{DSS}	V				

P- / P-CHANNEL Electrical Characteristic Curve







P- / P-CHANNEL Electrical Characteristic Curve

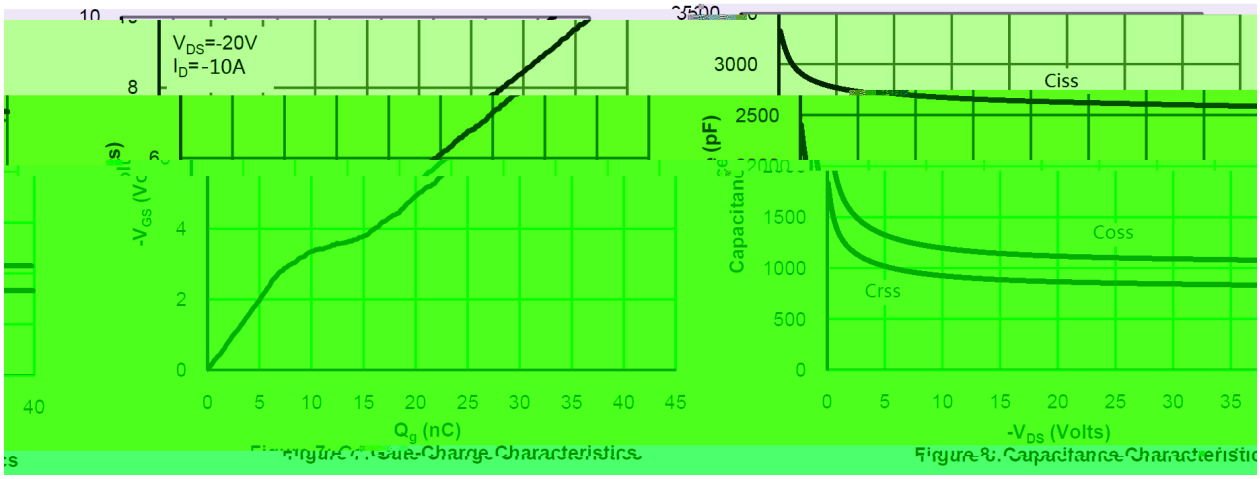


Figure 7: Gate-Charge Characteristics

Figure 8: Capacitance Characteristics

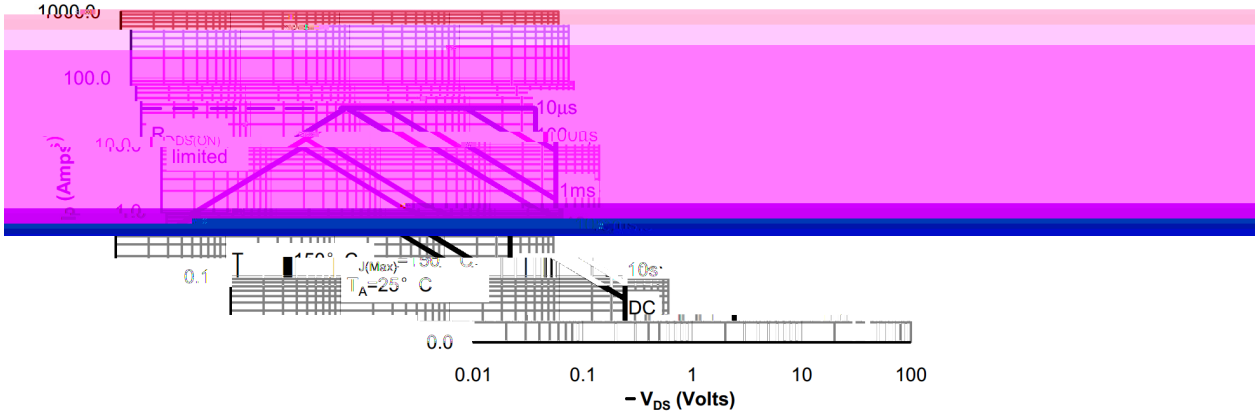


Figure 9: Maximum Forward Biased Safe Operating Area

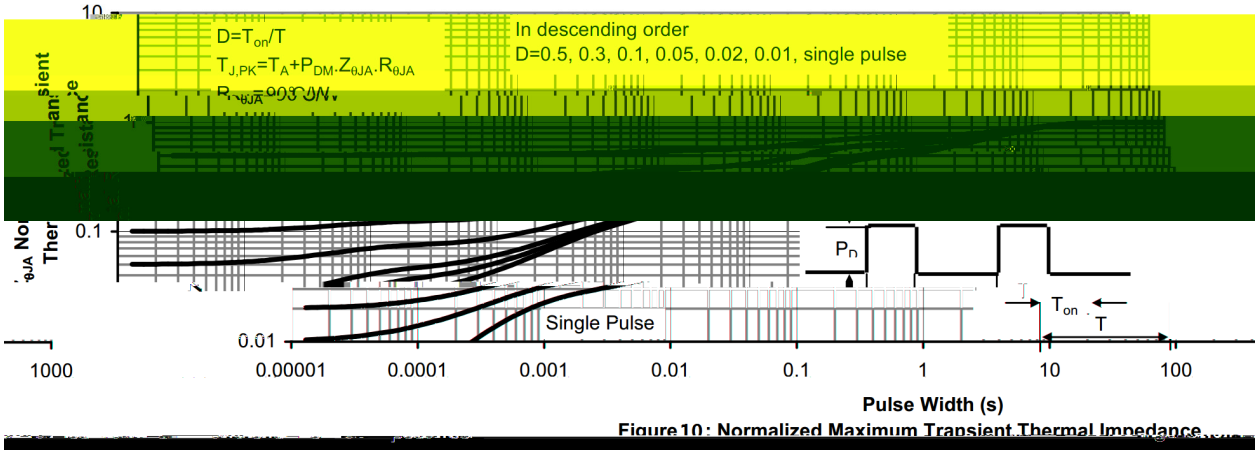
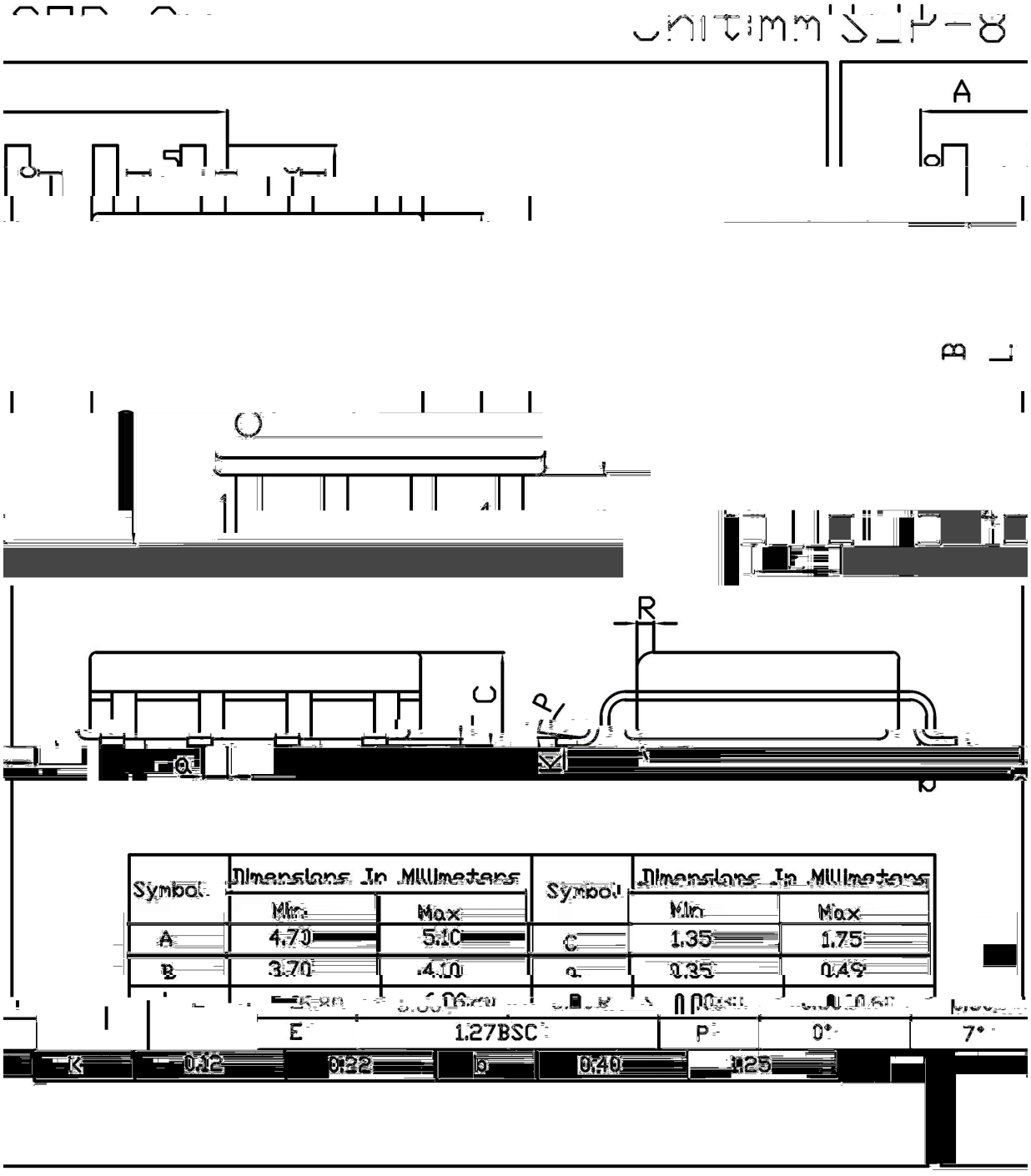


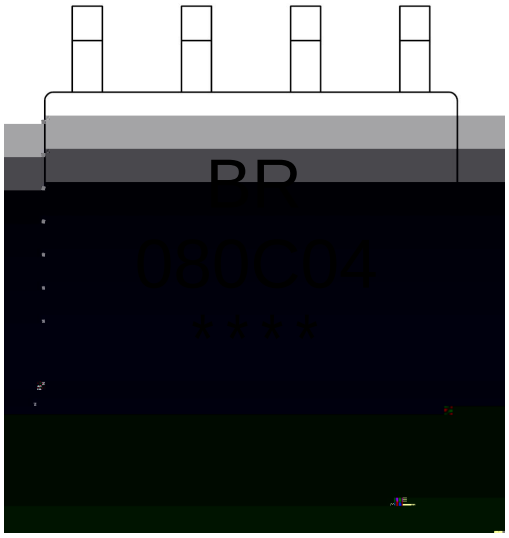
Figure 10: Normalized Maximum Transient Thermal Impedance

/ Package Dimensions



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	4.70	5.10	C	1.35	1.75
B	3.70	4.10	a	0.35	0.49

/ Marking Instructions



BR

080C04

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Note:

BR:	Company Code
080C04:	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