



Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	40	V
Drain Current	$I_D(T_c=25^\circ\text{C})$	325	A
	$I_D(T_c=100^\circ\text{C})$	325	A
Pulsed Drain Current	I_{DM}	1300	A
Gate-Source Voltage	V_{GS}	20	V
Single Pulsed Avalanche Energy $L=1.0\text{mH}$	E_{AS}	1250	mJ
Continuous-Source Current	$I_S(T_c=25^\circ\text{C})$	300	A
Total Power Dissipation	$P_D(T_c=25^\circ\text{C})$	375	W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 175	
Thermal Resistance-Junction to Ambient	R_{JA}	60	/W
Thermal Resistance-Junction to Case	R_{JC}	0.4	

Notes:

Pulse width $\leq 300\ \mu\text{s}$, duty cycle $\leq 2\%$
 Surface Mounted on 1 in² pad area, $t \leq 10\ \text{sec}$
 Limited by bonding wire

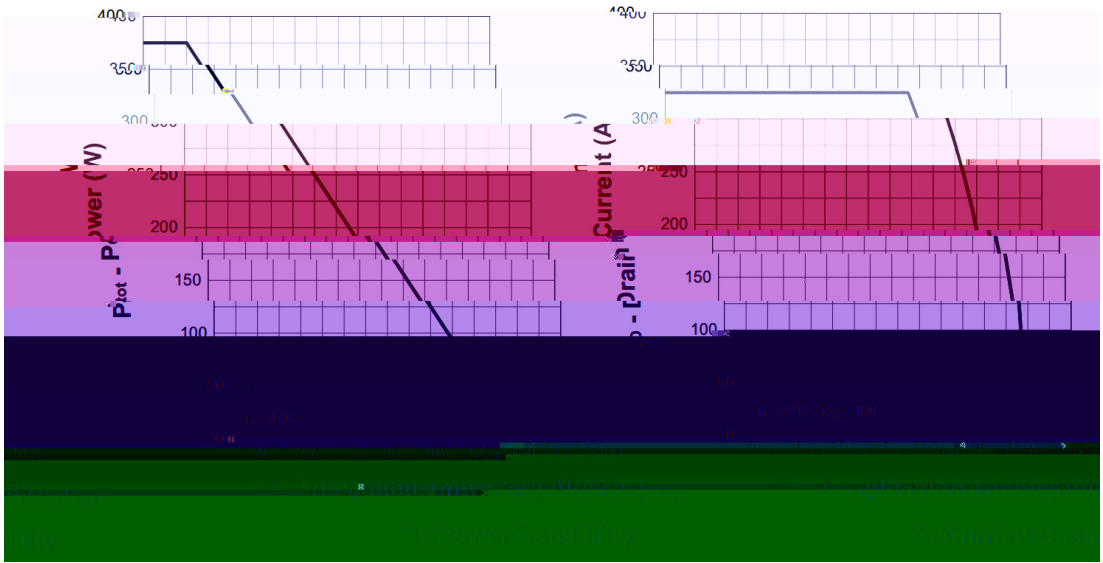
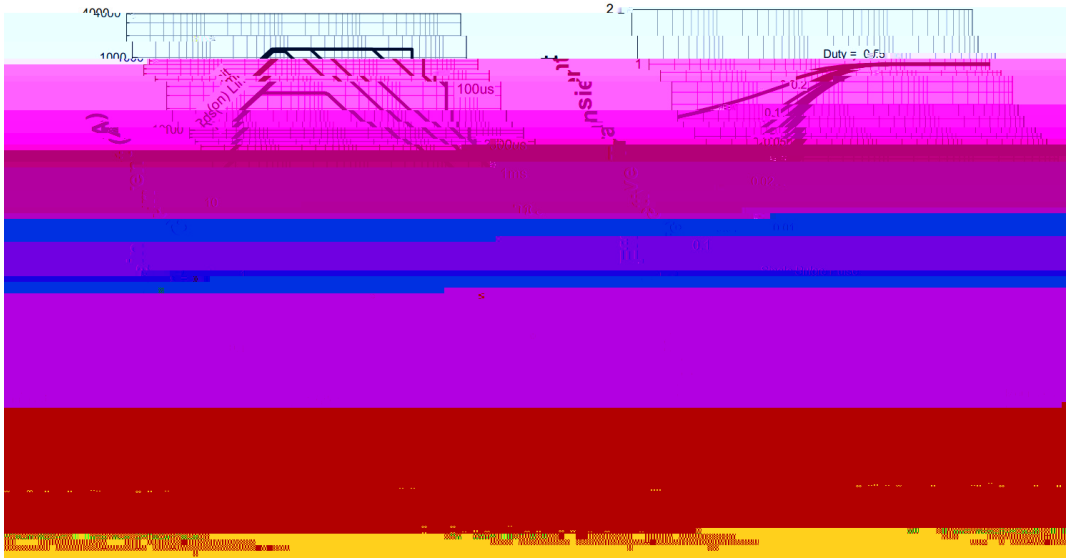
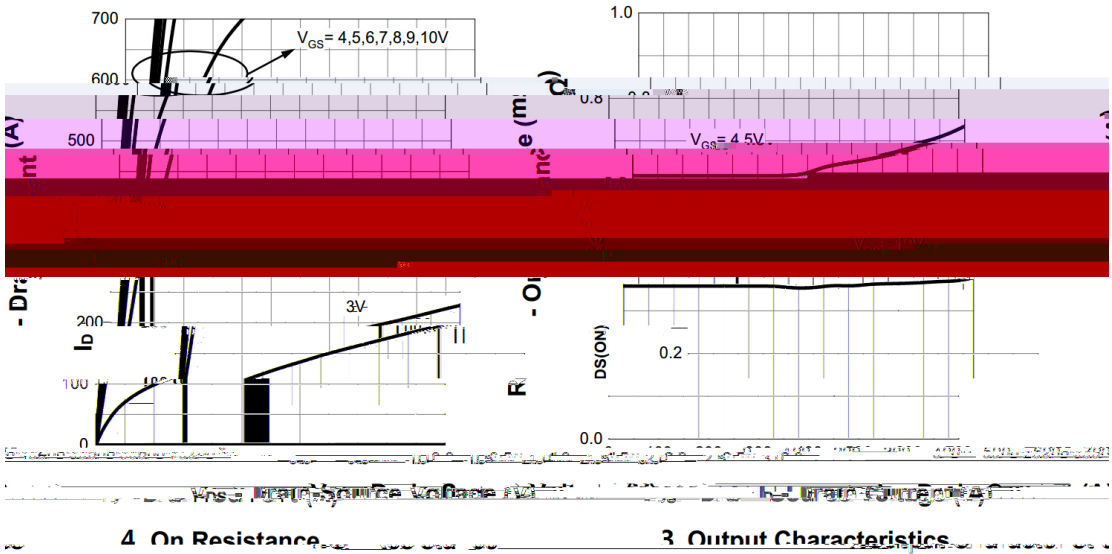
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0\text{V}$ $I_D=250\mu\text{A}$	40			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=32\text{V}$ $V_{GS}=0\text{V}$			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20\text{V}$ $V_{DS}=0\text{V}$			100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu\text{A}$	1		2	V

Static Drain-Source

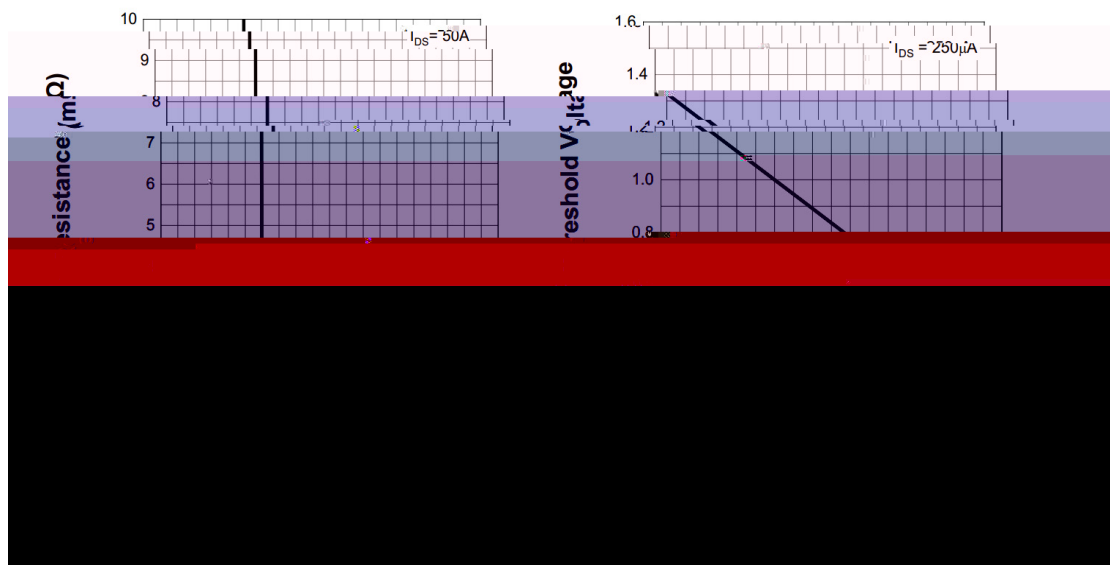
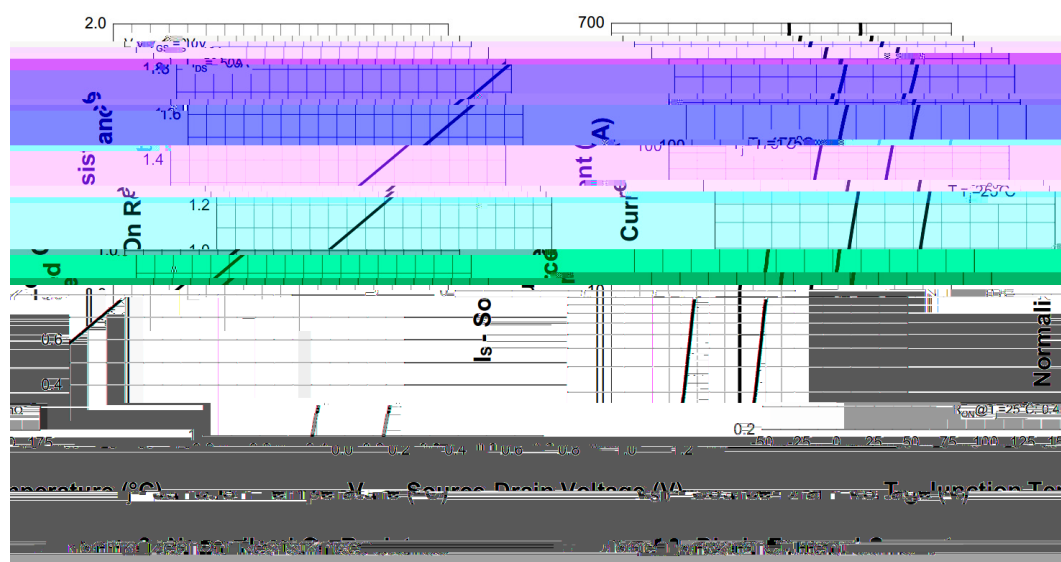
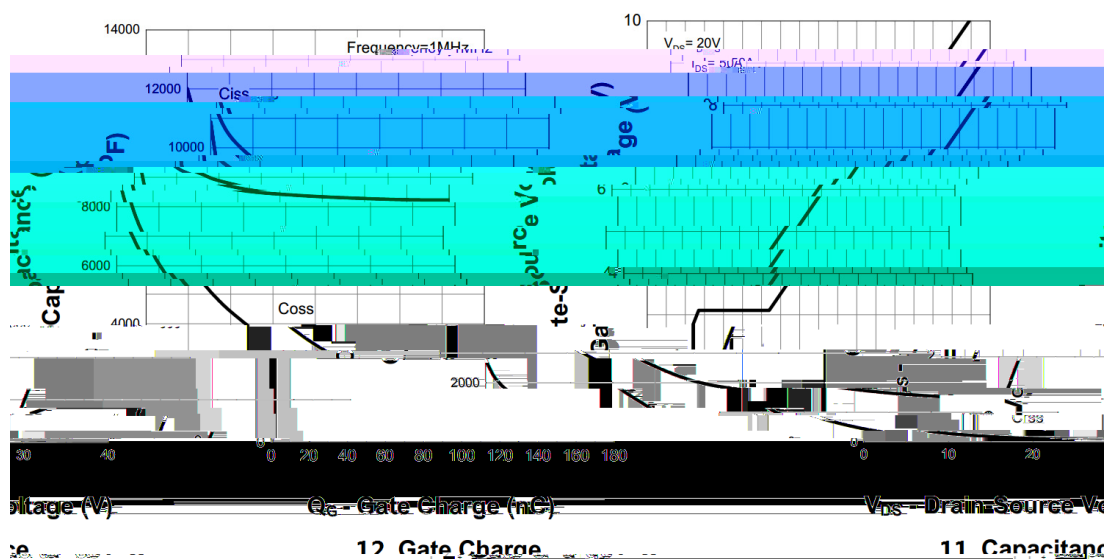

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	Q_g	$V_{GS}=10V, \quad V_{DS}=20V,$ $I_D=50A$		169		nC
Gate Source Charge	Q_{gs}			27		
Gate Drain Charge	Q_{gd}			37		
Turn-On Delay Time	$t_{d(on)}$	$V_{GEN}=10V \quad V_{DS}=20V$ $R_L=0.4\Omega \quad R_G=3.9\Omega$ $I_{DS}=50A$		14		ns
Turn-On Rise Time	t_r			92		
Turn-Off Delay Time	$t_{d(off)}$			178		
Turn-Off Fall Time	t_f			144		

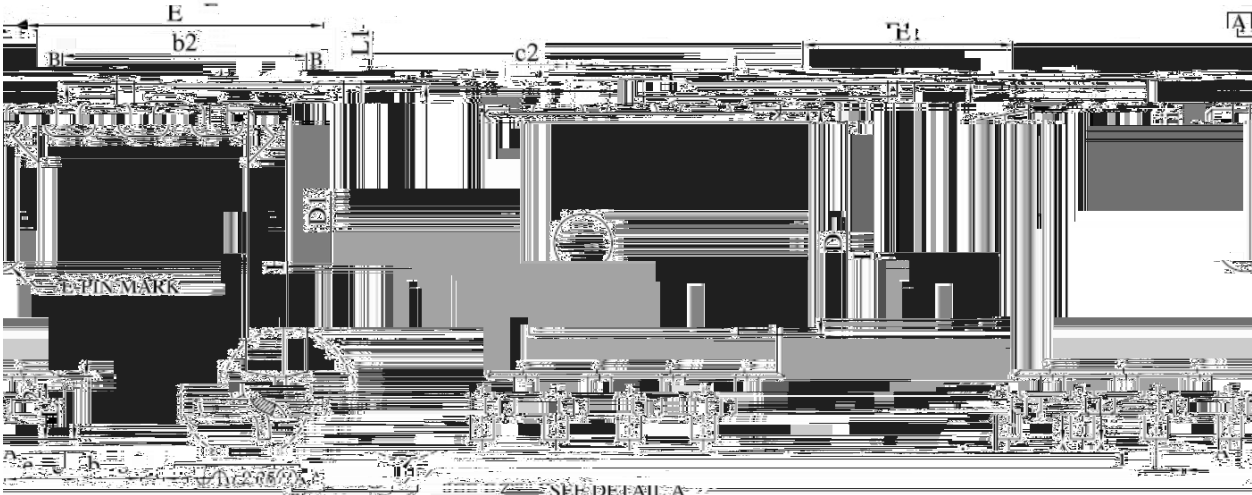
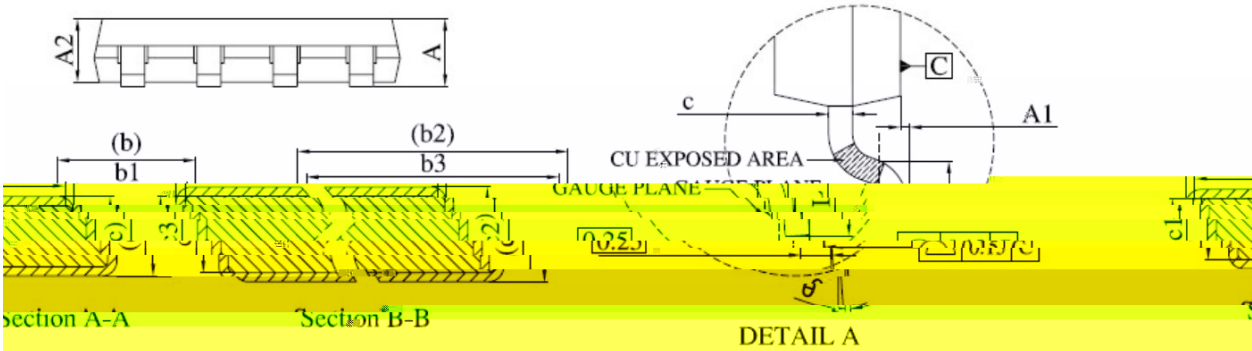
/ Electrical Characteristic Curve



/ Electrical Characteristic Curve



/ Package Dimensions



Dimensions in Millimeters				Dimensions in Millimeters			
Symbol		MIN.		MAX.		MIN.	
A		1.00	1.30	F		4.95	5.30
A1		0.00	0.15	F1		3.50	3.70
A2		0.98	1.12	e		1.27 BSC.	
b		0.35	0.50	H		5.95	6.25
b1		0.33	0.46	L		-	0.75
b2		4.00	4.41	L1		0.75	0.85
b3		4.00	4.41	L2		0.75	0.85
c		0.25	0.35	L3		0.75	0.85
c1		0.25	0.35	L4		0.75	0.85
c2		0.25	0.35	L5		0.75	0.85
E		10.00	10.41	L6		0.75	0.85
E1		10.00	10.41	L7		0.75	0.85
L		10.00	10.41	L8		0.75	0.85
L1		10.00	10.41	L9		0.75	0.85
L2		10.00	10.41	L10		0.75	0.85
L3		10.00	10.41	L11		0.75	0.85
L4		10.00	10.41	L12		0.75	0.85
L5		10.00	10.41	L13		0.75	0.85
L6		10.00	10.41	L14		0.75	0.85
L7		10.00	10.41	L15		0.75	0.85
L8		10.00	10.41	L16		0.75	0.85
L9		10.00	10.41	L17		0.75	0.85
L10		10.00	10.41	L18		0.75	0.85
L11		10.00	10.41	L19		0.75	0.85
L12		10.00	10.41	L20		0.75	0.85
L13		10.00	10.41	L21		0.75	0.85
L14		10.00	10.41	L22		0.75	0.85
L15		10.00	10.41	L23		0.75	0.85
L16		10.00	10.41	L24		0.75	0.85
L17		10.00	10.41	L25		0.75	0.85
L18		10.00	10.41	L26		0.75	0.85
L19		10.00	10.41	L27		0.75	0.85
L20		10.00	10.41	L28		0.75	0.85
L21		10.00	10.41	L29		0.75	0.85
L22		10.00	10.41	L30		0.75	0.85
L23		10.00	10.41	L31		0.75	0.85
L24		10.00	10.41	L32		0.75	0.85
L25		10.00	10.41	L33		0.75	0.85
L26		10.00	10.41	L34		0.75	0.85
L27		10.00	10.41	L35		0.75	0.85
L28		10.00	10.41	L36		0.75	0.85
L29		10.00	10.41	L37		0.75	0.85
L30		10.00	10.41	L38		0.75	0.85
L31		10.00	10.41	L39		0.75	0.85
L32		10.00	10.41	L40		0.75	0.85
L33		10.00	10.41	L41		0.75	0.85
L34		10.00	10.41	L42		0.75	0.85
L35		10.00	10.41	L43		0.75	0.85
L36		10.00	10.41	L44		0.75	0.85
L37		10.00	10.41	L45		0.75	0.85
L38		10.00	10.41	L46		0.75	0.85
L39		10.00	10.41	L47		0.75	0.85
L40		10.00	10.41	L48		0.75	0.85
L41		10.00	10.41	L49		0.75	0.85
L42		10.00	10.41	L50		0.75	0.85
L43		10.00	10.41	L51		0.75	0.85
L44		10.00	10.41	L52		0.75	0.85
L45		10.00	10.41	L53		0.75	0.85
L46		10.00	10.41	L54		0.75	0.85
L47		10.00	10.41	L55		0.75	0.85
L48		10.00	10.41	L56		0.75	0.85
L49		10.00	10.41	L57		0.75	0.85
L50		10.00	10.41	L58		0.75	0.85
L51		10.00	10.41	L59		0.75	0.85
L52		10.00	10.41	L60		0.75	0.85
L53		10.00	10.41	L61		0.75	0.85
L54		10.00	10.41	L62		0.75	0.85
L55		10.00	10.41	L63		0.75	0.85
L56		10.00	10.41	L64		0.75	0.85
L57		10.00	10.41	L65		0.75	0.85
L58		10.00	10.41	L66		0.75	0.85
L59		10.00	10.41	L67		0.75	0.85
L60		10.00	10.41	L68		0.75	0.85
L61		10.00	10.41	L69		0.75	0.85
L62		10.00	10.41	L70		0.75	0.85
L63		10.00	10.41	L71		0.75	0.85
L64		10.00	10.41	L72		0.75	0.85
L65		10.00	10.41	L73		0.75	0.85
L66		10.00	10.41	L74		0.75	0.85
L67		10.00	10.41	L75		0.75	0.85
L68		10.00	10.41	L76		0.75	0.85
L69		10.00	10.41	L77		0.75	0.85
L70		10.00	10.41	L78		0.75	0.85
L71		10.00	10.41	L79		0.75	0.85
L72		10.00	10.41	L80		0.75	0.85
L73		10.00	10.41	L81		0.75	0.85
L74		10.00	10.41	L82		0.75	0.85
L75		10.00	10.41	L83		0.75	0.85
L76		10.00	10.41	L84		0.75	0.85
L77		10.00	10.41	L85		0.75	0.85
L78		10.00	10.41	L86		0.75	0.85
L79		10.00	10.41	L87		0.75	0.85
L80		10.00	10.41	L88		0.75	0.85
L81		10.00	10.41	L89		0.75	0.85
L82		10.00	10.41	L90		0.75	0.85
L83		10.00	10.41	L91		0.75	0.85
L84		10.00	10.41	L92		0.75	0.85
L85		10.00	10.41	L93		0.75	0.85
L86		10.00	10.41	L94		0.75	0.85
L87		10.00	10.41	L95		0.75	0.85
L88		10.00	10.41	L96		0.75	0.85
L89		10.00	10.41	L97		0.75	0.85
L90		10.00	10.41	L98		0.75	0.85
L91		10.00	10.41	L99		0.75	0.85
L92		10.00	10.41	L100		0.75	0.85

/ Marking Instructions



BR

004N04S

Note

BR: Company Code

004N04S: 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;

2

245±5

5±0.5sec;

3

2 10 /sec.
- 1.Preheating:150~180 , Time:60~90sec.

2.Peak Temp.:245±5 , Duration:5±0.5sec.

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 mm ³)
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