Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	40	V
Drain Current	I_D(Tc=25)	325	A
	I_D(Tc=100)	325	A
Pulsed Drain Current	I_{DM}	1300	A
Gate-Source Voltage	V_{GS}	20	V
Single Pulsed Avalanche Energy L=1.0mH	E_{AS}	1250	mJ
Continuous-Source Current	I_S(Tc=25)	300	A
Total Power Dissipation	P_D(Tc=25)	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 ≤ 300 μs, duty cycle ≤ 2 %
Surface Mounted on 1 in^2 pad area, t ≤ 10 sec
Limited by bonding wire

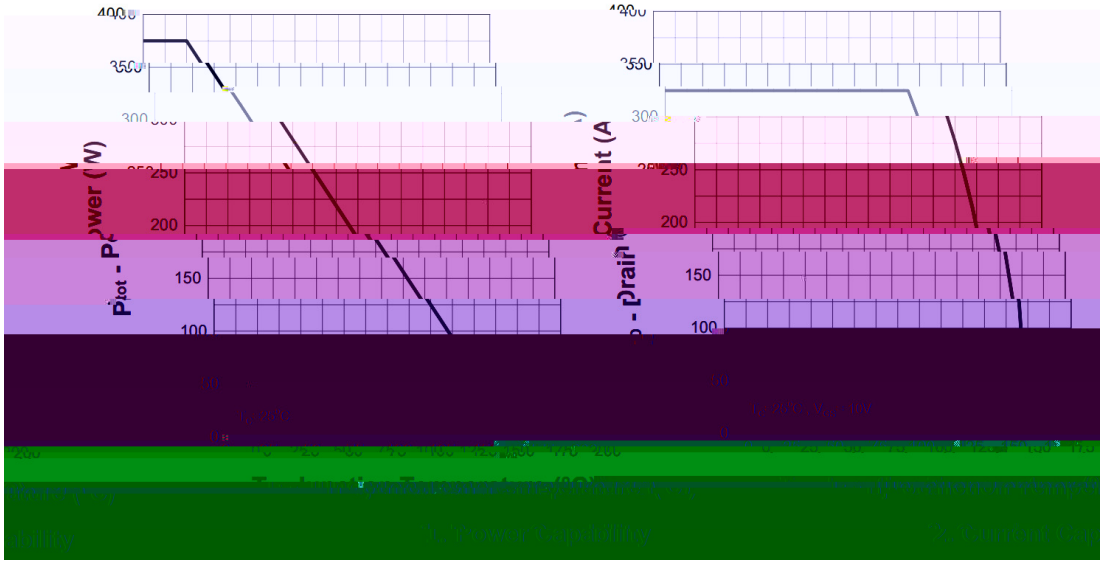
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250μA	40			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=32V V_{GS}=0V			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±20V V_{DS}=0V			100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}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

Static Drain-Source

/ Electrical Characteristics(Ta=25)

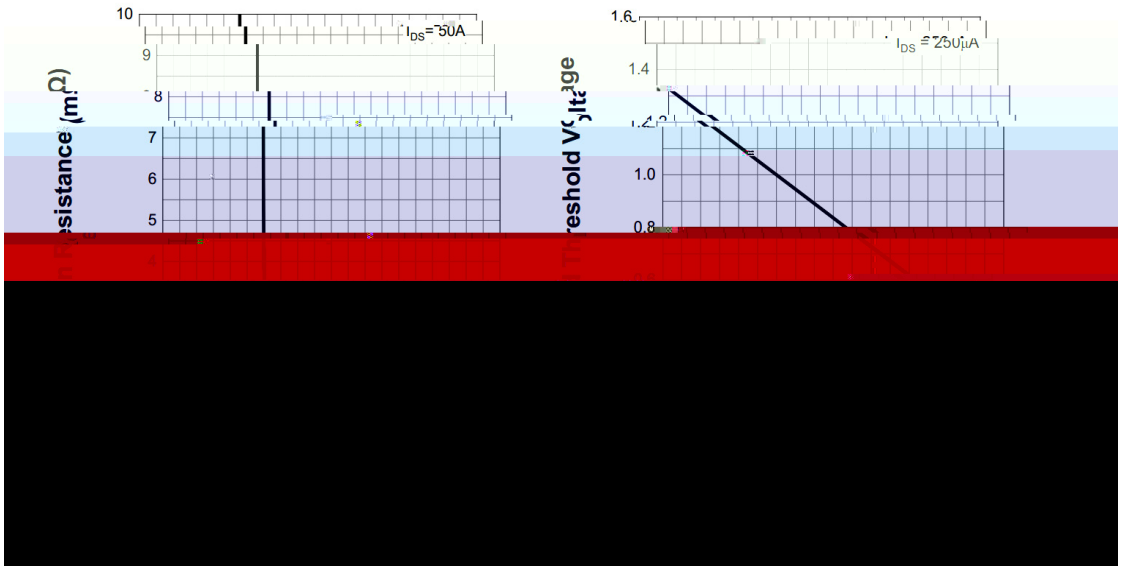
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	Q_g	V_{GS}=10V, V_{DS}=20V, I_D=50A		169		nC
Gate Source Charge	Q_{gs}			27		
Gate Drain Charge	Q_{gd}			37		
Turn-On Delay Time	$t_{d(on)}$	V_{GEN}=10V V_{DS}=20V R_L=0.4Ω R_G=3.9Ω I_{DS}=50A		14		ns
Turn-On Rise Time	t_r			92		
Turn-Off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

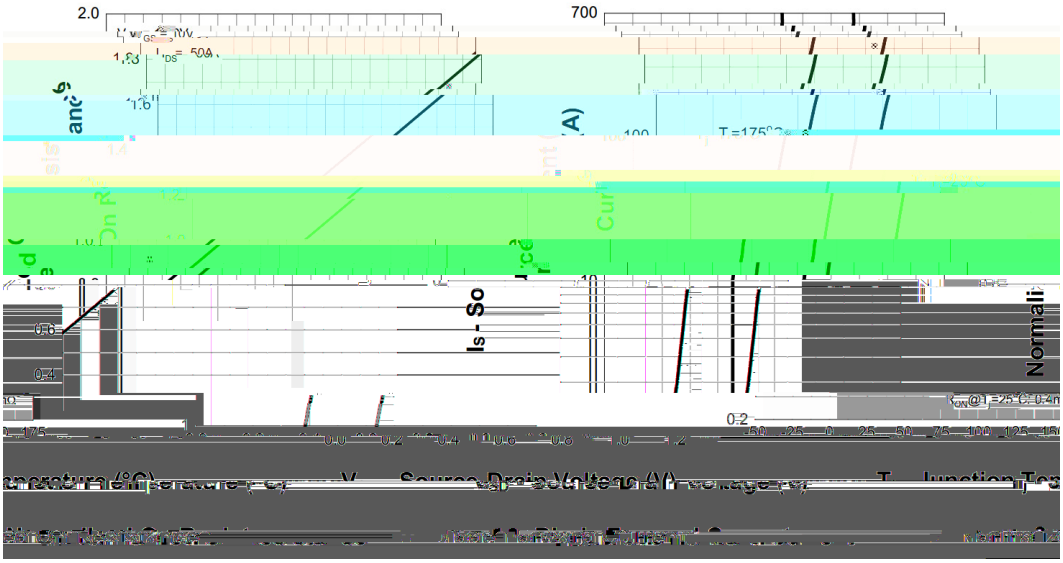
/ Electrical Characteristic Curve

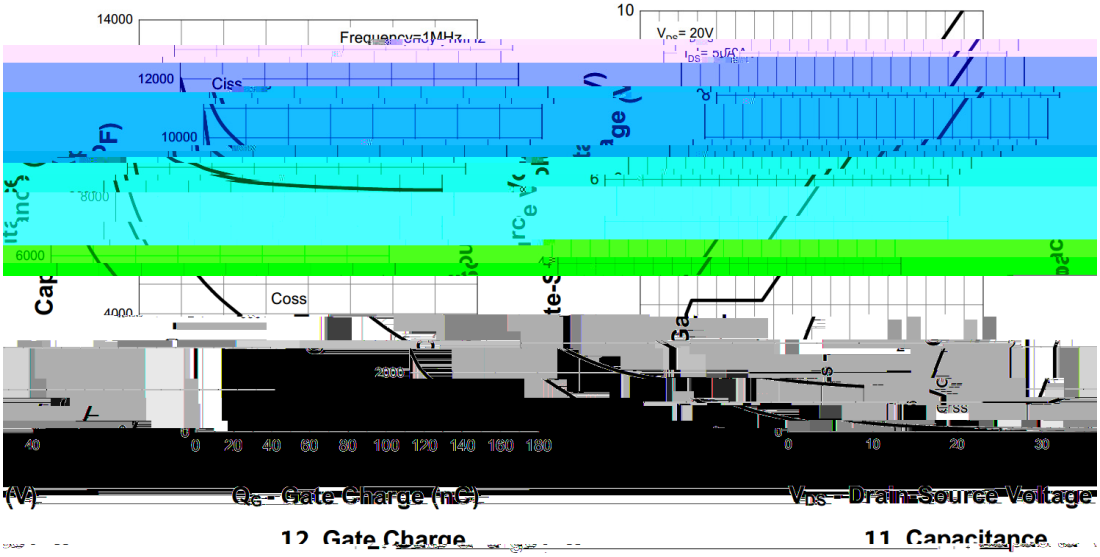


t Characteristics 4. On Resistance 3. Outpu

/ Electrical Characteristic Curve

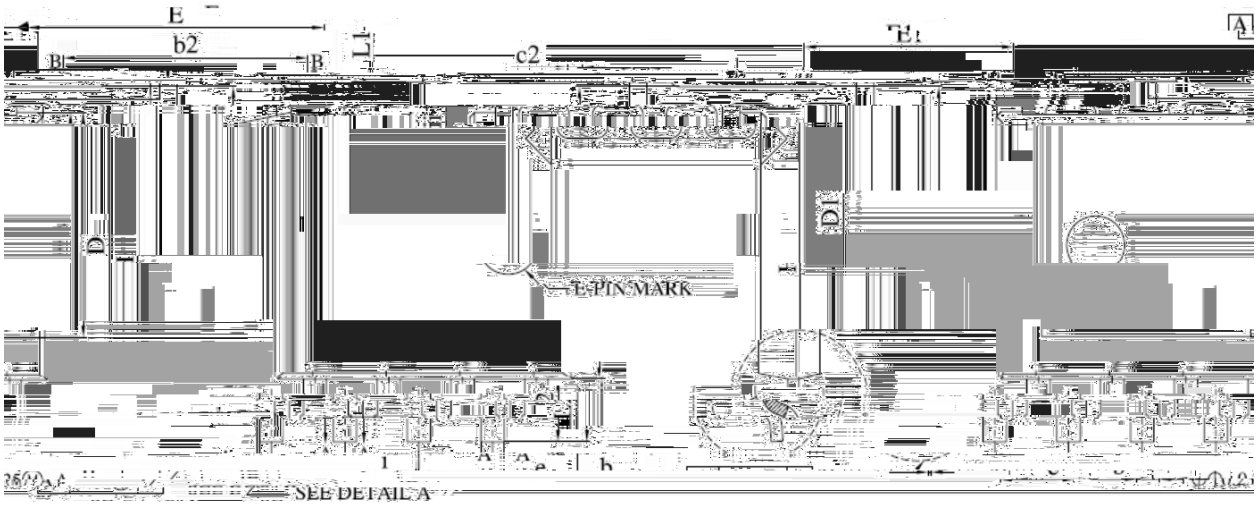


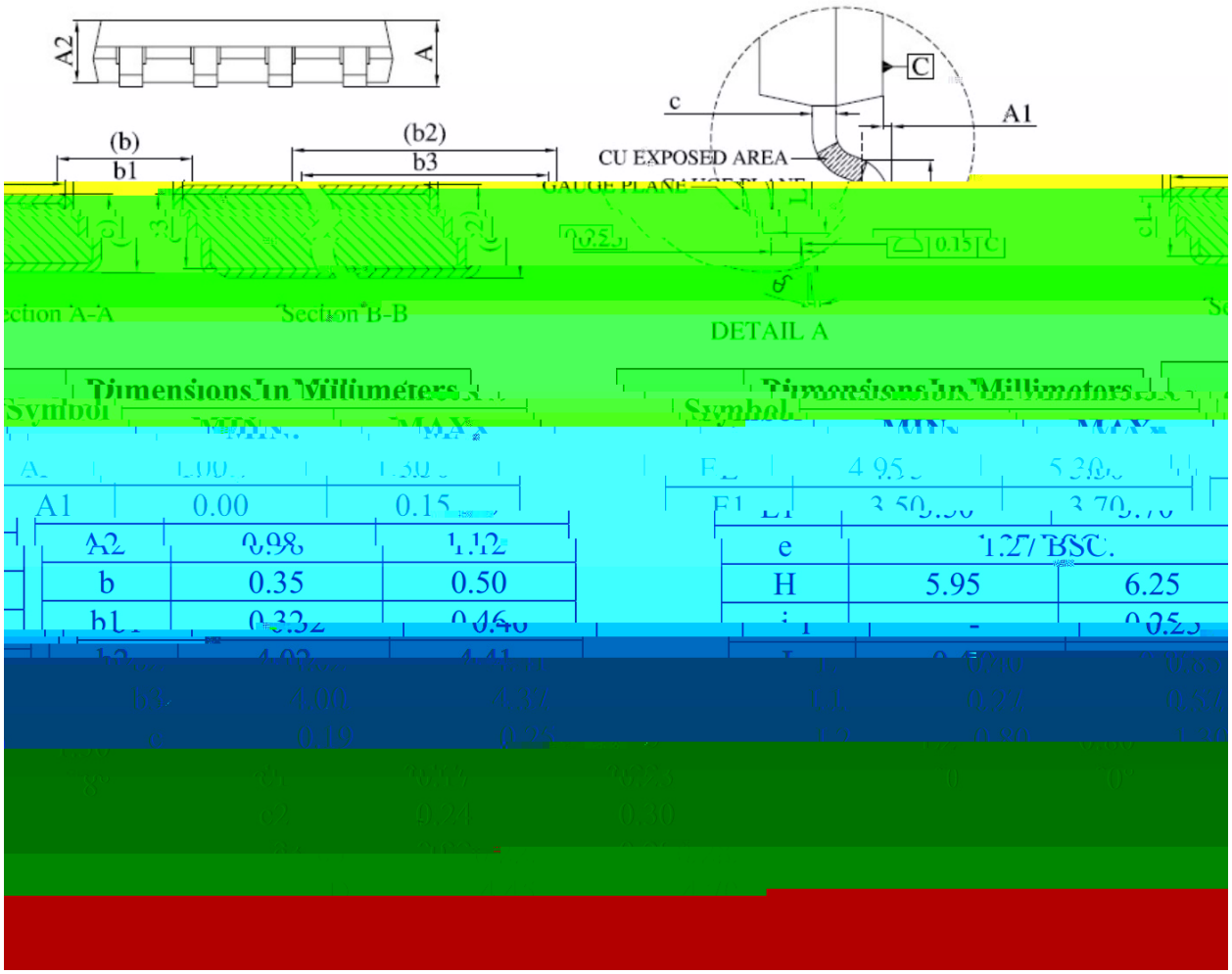




12 Gate Charge 11 Capacitance

/ Package Dimensions





Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	MIN.	MAX.	Symbol	MIN.	MAX.
A	1.00	1.30	E	4.95	5.30
A1	0.00	0.15	E1	3.50	3.70
A2	0.98	1.12	e	1.27 BSC.	
b	0.35	0.50	H	5.95	6.25
b1	0.32	0.46	L	-	0.25
b2	4.02	4.41	L1	0.50	0.80
b3	4.00	4.37	L2	0.25	0.50
c	0.19	0.25	R	0.20	-
c1	0.19	0.23	R1	0.20	-
c2	0.19	0.25	θ	0°	8°
D	4.80	5.10	θ1	0°	-
D1	4.10	4.30	θ2	9°	13°
D2	0.24	0.30			

/ 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;	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)