/ Absolute Maximum Ratings(T_C=25)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	120	V
Drain Current - Continuous		I_D	260	A
Drain Current - Continuous		I_D(T_c=100℃)	185	A
Drain Current – Pulsed		I_{DM}	1040	A
Gate-Source Voltage		V_{GS}	±20	V
Power Dissipation		P_{tot}	300	W
Continuous-Source Current		I_S	260	A
Single Pulse Avalanche Energy(V_{DD}=50V,L=1mH)		E_{AS}	2450	mJ
Junction and Storage Temperature Range		T_j, T_{stg}	-55 to 175	
Thermal resistance, junction - ambient	Steady-State	$R_{\theta JA}$	45	/ W
Thermal resistance, junction - case	Steady-State	$R_{\theta JC}$	0.4	

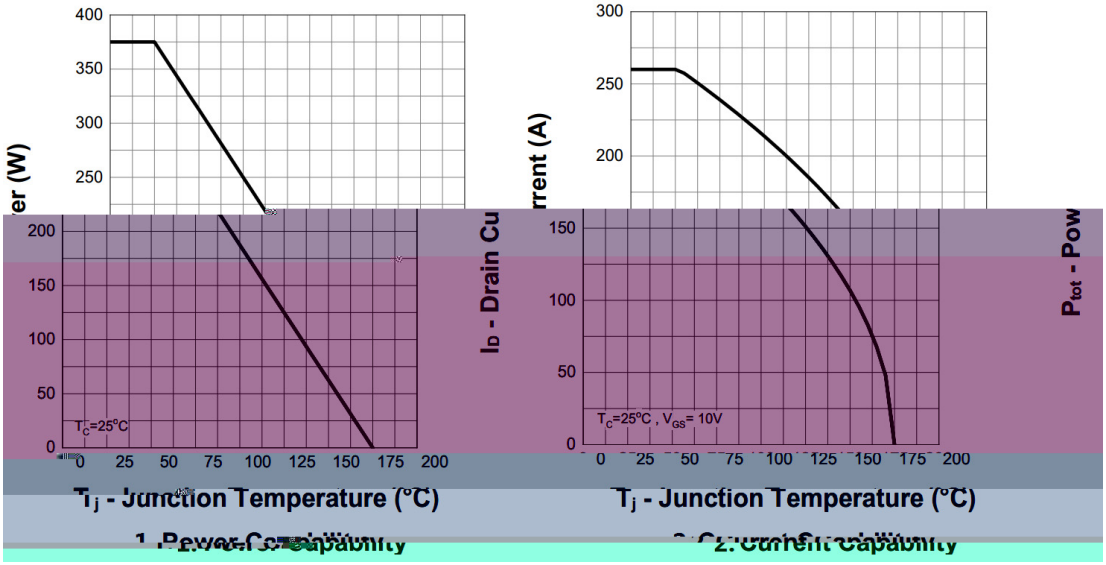
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=250uA, V_{GS}=0V	120			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=96V, V_{GS}=0V			1	uA
Gate-Body leakage current	I_{GSS}	V_{DS}=0V, V_{GS}= ±20V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250uA	2.0		4.0	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=50A		1.6	2.2	mΩ
	$R_{DS(ON)}$	V_{GS}=6V, I_D=30A		2.3	2.8	mΩ
Diode Forward Voltage	V_{SD}	I_S=50A, V_{GS}=0V			1.3	V
Input Capacitance	C_{iss}	V_{DS}=60V V_{GS}=0V f=1.0MHz		11834		pF
Output Capacitance	C_{oss}			1350		
Reverse Transfer Capacitance	C_{rss}			78		
Total Gate Charge	Q_g	V_{GS}=10V, V_{DS}=60V I_{DS}=50A		213		nC
Gate Source Charge	Q_{gs}			62		
Gate Drain Charge	Q_{gd}			54		

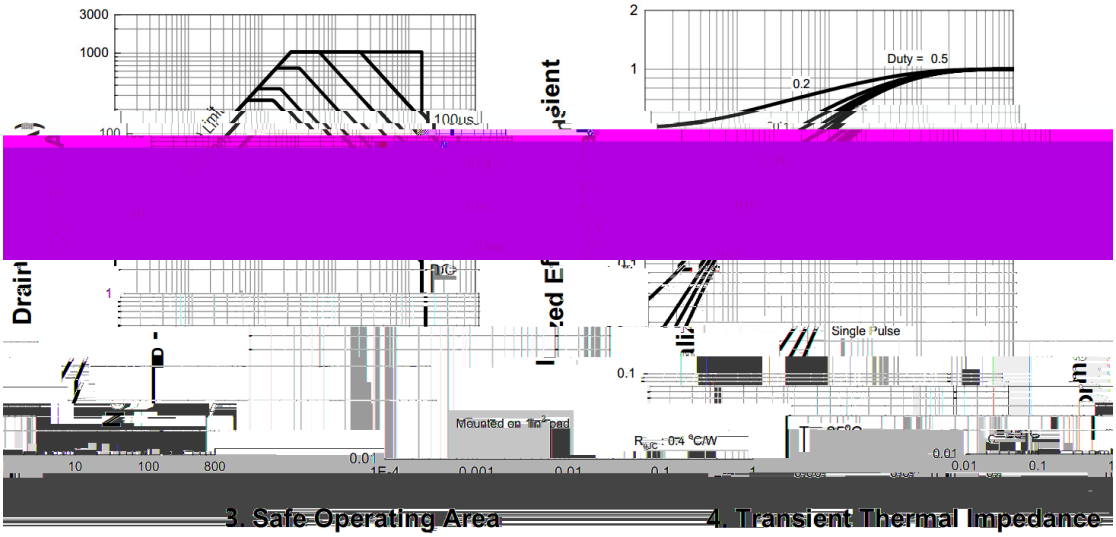
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=10V V_{DS}=60V R_L=1.2Ω R_G=3.9Ω I_{DS}=50A		30		ns
Turn-On Rise Time	t_r			102		
Turn-Off Delay Time	$t_{d(off)}$			143		
Turn-Off Fall Time	t_f			101		
Reverse Recovery Time	t_{rr}	I_{DS} = 50 A, V_{GS} = 0 V dI_{SD}/dt = 100 A/μs		137		nS
Reverse Recovery Charge	Q_{rr}			474		nC

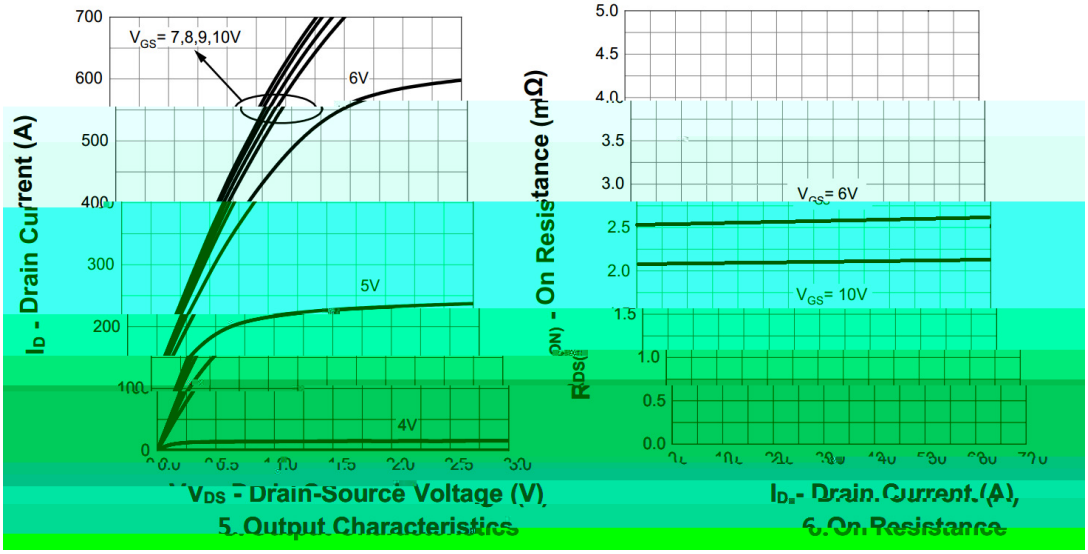
/ Electrical Characteristic Curve



1. Power Capability 2. Current Capability

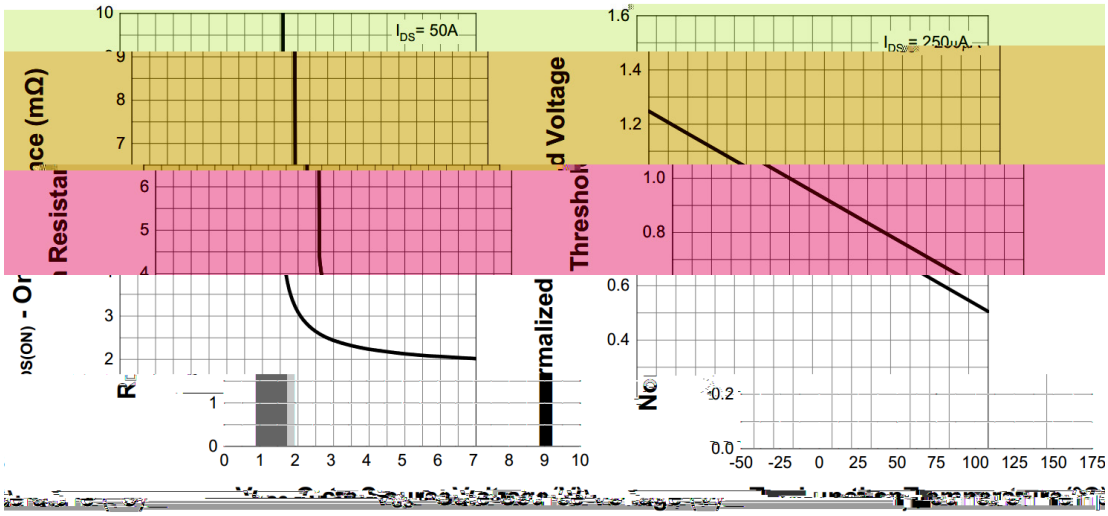


3. Safe Operating Area 4. Transient Thermal Impedance

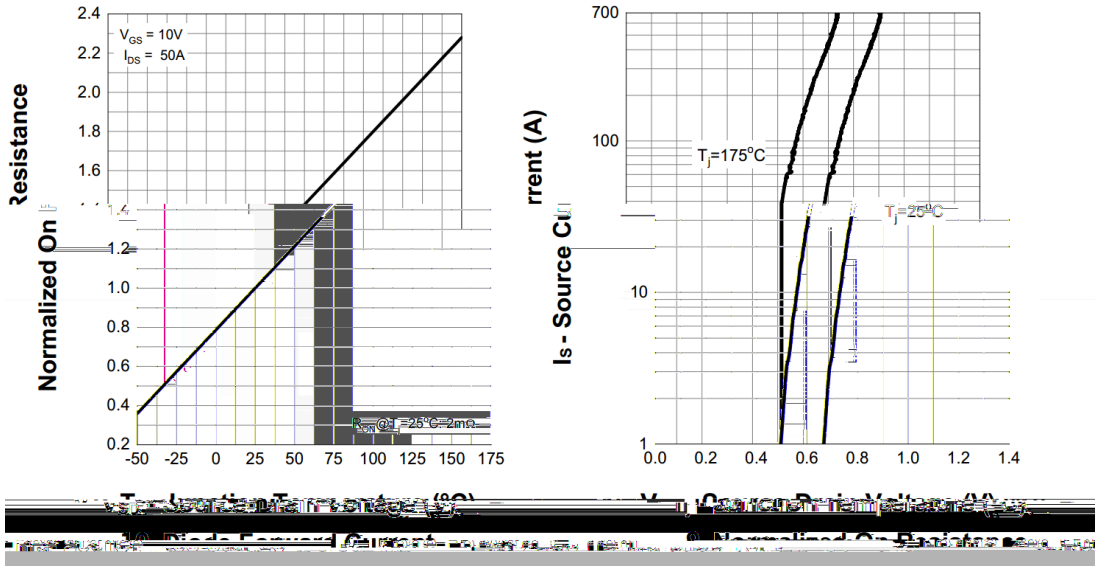


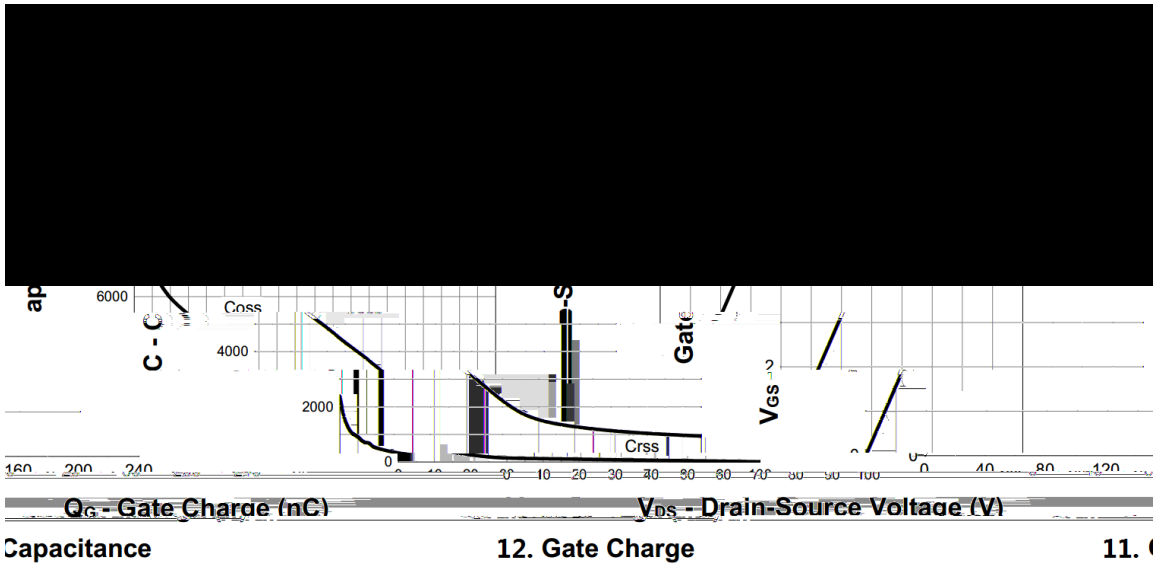
5. Output Characteristics 6. On Resistance

/ Electrical Characteristic Curve



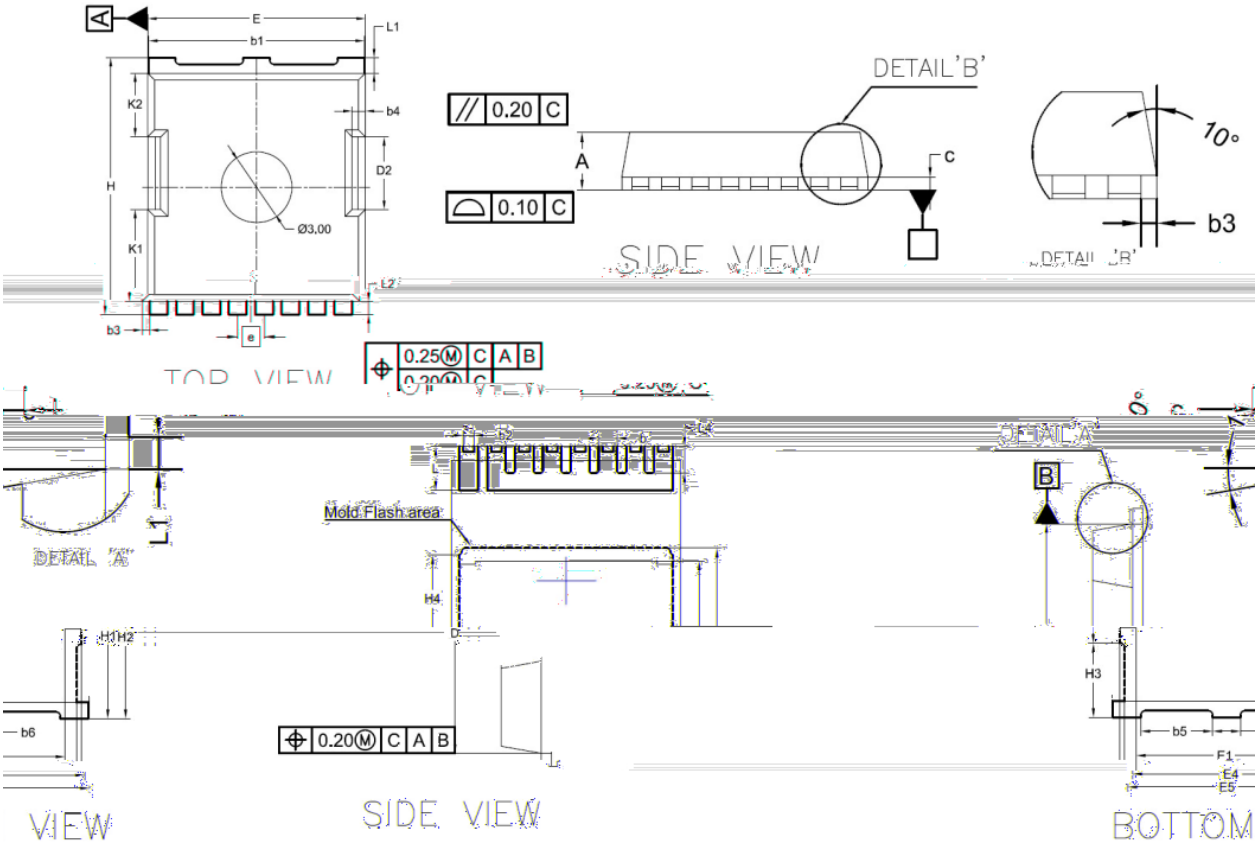
shold Voltage 7. Transfer Characteristics 8. Normalized Thres





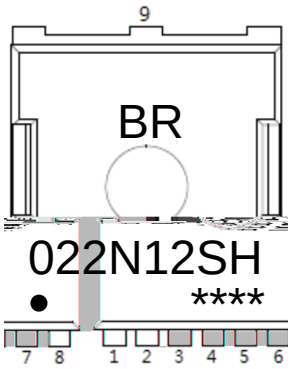
Capacitance 12. Gate Charge 11.

/ Package Dimensions



Symbol	Dimensions In Millimeters			Symbol	Dimensions In Millimeters		
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.
A	2.200	2.300	2.400	b1	9.700	9.800	9.900
c	0.492	0.500	0.508	b1	0.420	0.460	0.500
D	10.280	10.380	10.480	b3		0.350	
E	9.800	9.900	10.000	b4		0.600	
e		1.20 BSC		b5		3.100	
H	11.580	11.680	11.780	b6		1.200	
H1	6.650	6.750	6.850	L	1.700	1.900	2.100
H2		7.300		L1		0.700	
H3		3.200		L2		0.600	
H4		3.800		L4	1.050	1.150	1.250
K1		4.180		L5	0.500	0.600	0.700
K2		2.900		E1		7.800	
D2		3.300		E4		8.800	
b	0.700	0.800	0.900	E5		9.200	

/ Marking Instructions



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022N12SH

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Note

BR	Company Code
022N12SH	Product Type Code
****:	Lot No. Code, code change with Lot No

BRCS022N12SHTL

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