v ¨Q Parameter	¬ N Symbol	¨QË Rating	D Ð Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	±20	V
Drain Current(DC)	I_D(T_C=25 ł)	400	A
	I_D(T_C=100 ł)	215	A
Drain Current – Pulsed	I_{DM}	1200	A
Power Dissipation	P_{tot}	250	W
Junction and Storage Temperature Range	T_j, T_{stg}	-55 to 175	ł
Continuous-Source Current	I_S	400	A
Single Pulse Avalanche Energy (V_{DD}=50V , L=1.0mH)	E_{AS}	2592	mJ
Thermal resistance, junction - Ambient	$R_{\theta JA}$	46	ł 2 Z
Thermal resistance, junction - case	$R_{\theta JC}$	0.6	

v ¨Q Parameter	¬ N Symbol	Ð ¦ ¡ Ţ Test Conditions	¾ ņ Ë Min	Ɛ ʒ Ë Typ	¾ ² Ë Max	D Ð Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=250uA, V_{GS}=0V	100			V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250uA	2		4	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=80V, V_{GS}=0V			1	uA
Gate-Body leakage current	I_{GSS}	V_{DS}=0V, V_{GS}= ±20V			±100	nA
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=50A		1.1	1.3	mƑ
		V_{GS}=6V, I_D=30A		1.5	2.0	
Diode Forward Voltage	V_{SD}	I_S=50A, V_{GS}=0V			1.3	V
Reverse Recovery Time	t_{rr}	I_F = 50A V_{GS}=0V dI_{SD}/dt = 100 A/µs		140		ns
Reverse Recovery Charge	Q_{rr}			403		nC
Input Capacitance	C_{iss}	V_{DS}=50V V_{GS}=0V f=1.0MHz		12881		pF
Output Capacitance	C_{oss}			2122		
Reverse Transfer Capacitance	C_{rss}			162		
Total Gate Charge	Q_g	V_{GS}=10V, V_{DS}=50V I_{DS}=50A		196		nC
Gate Source Charge	Q_{gs}			68		
Gate Drain Charge	Q_{gd}			35		

Tur.54 .48 ref55.2 ref388.74 210.32 .479922 refBTWTj15.62 IP4 7u 552oGS(th)r04]ŢJ7.0172 0 0 703 Tmd(on0 Tc( )T

BRCS013N10SHTL

/ Electrical Characteristic Curve

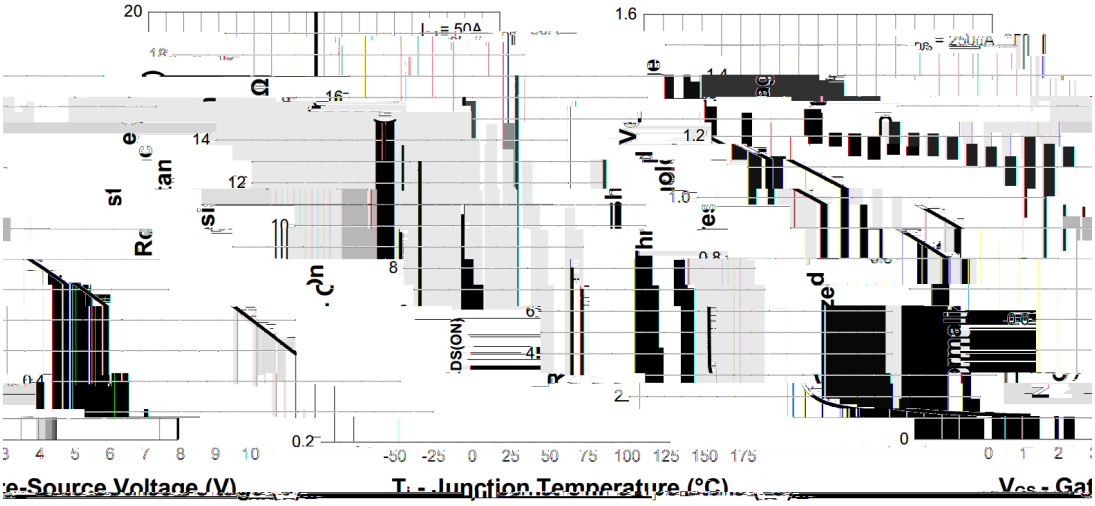


Fig7. Transfer Characteristics **Fig8. Normalized Threshold Voltage** **Fig**

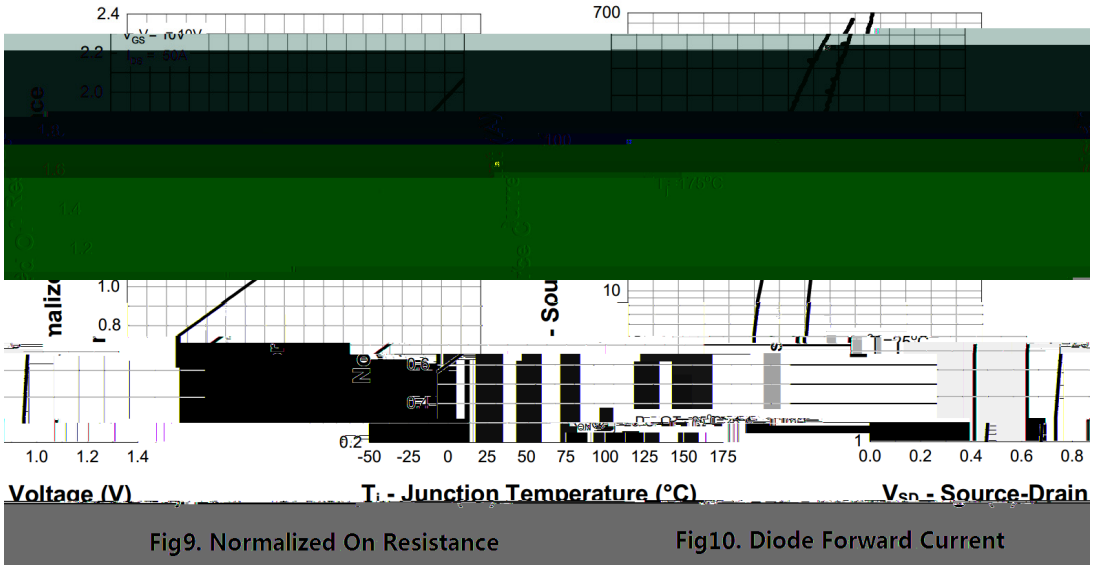
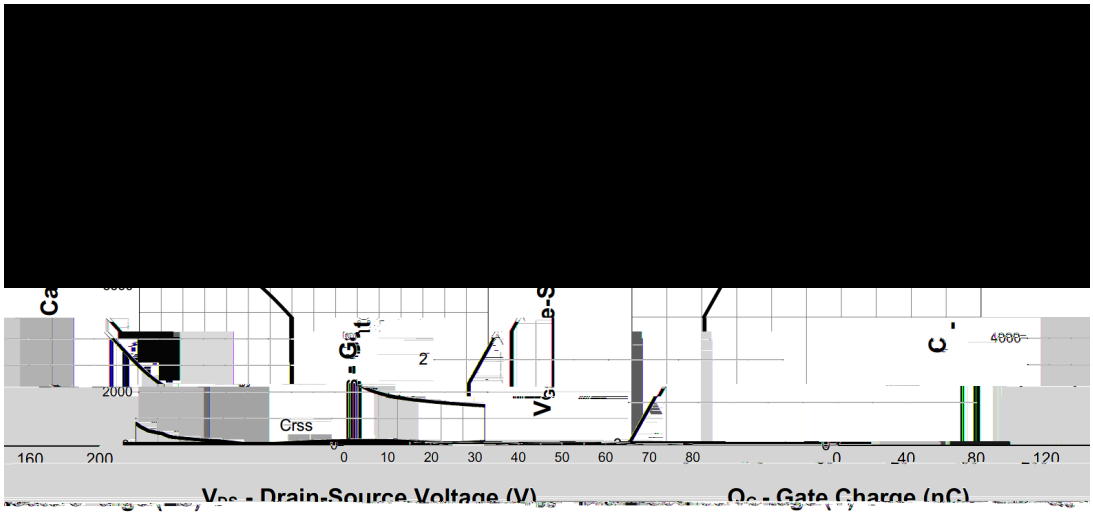
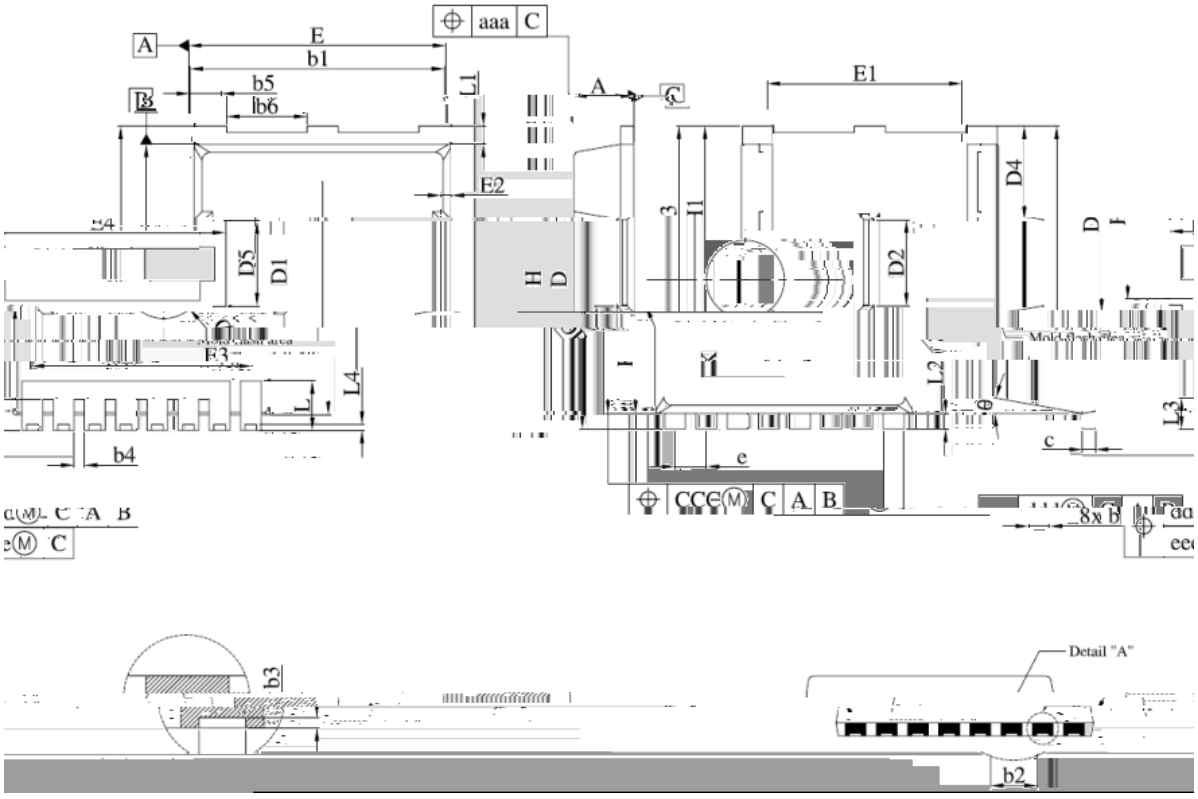


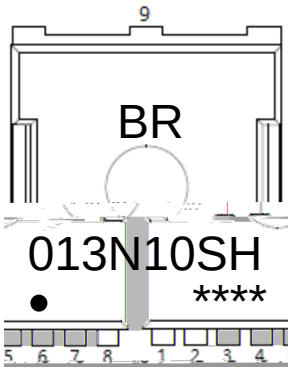
Fig9. Normalized On Resistance **Fig10. Diode Forward Current**



/ Package Dimensions



/ Marking Instructions



ب ˝ χ

EU χ	ѭ ʒ ᴵ Ɱ
013N10SH χ	ѭ ʒ ᴺ Ɱ
---- χ	ѭ ɬ ɾ ŋ̈ ᴺ Ɱ ɩ ɐ ɬ ɾ ŋ̈ ᴺ ψ ק

Note χ

BR χ	Company Code
013N10SH χ	Product Type Code
****:	Lot No. Code, code change with Lot No.

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)

ب ˝ χ

1 أ ♬ □ ỷ 150 Ḱ 180 ɬ ı `H ڑ 60 Ḱ 90sec;

2 Š Ö □ ỷ 245 ° 5 ɬ ı `H ڑ ˙Y ⺈ ⺾ 5 ° 0.5sec;

3 ì ˙ ⺌ ˛ ɔ ھ ỷ ⺾ 2 Ḱ 10 ɬ /sec.

Note:

1.Preheating:150~180 ɬ , Time:60~90sec.

2.Peak Temp.:245 ° 5 ɬ , Duration:5 ° 0.5sec.

3. Cooling Speed: 2~10 ɬ /sec.

/ Resistance to Soldering Heat Test Conditions

□ ỷ χ 260 ° 5 ɬ `H ڑ χ 10 ° 1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

ɔ ` ɣ ɛ / REEL

Package Type Ṃ ɛ ė Ǻ	Units	Dimension (unit mm³)