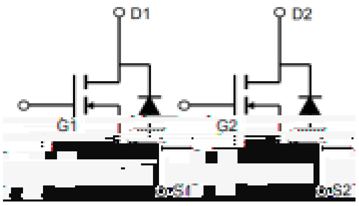
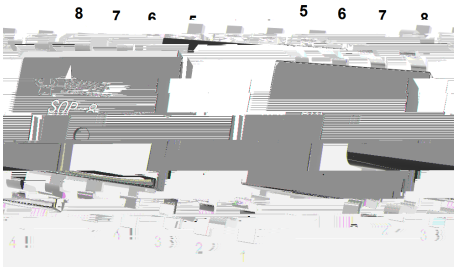
VRS0; ṂṂȽ Q ڗ PRV ʆῼ Ẕ ᖷ
Grxeoh Q0FKDQQHO PRVIHW lq d VRS0; Sodvwlf Sdfndjh1

V_{DS}(V)=30V I_D=12.3A
$R_{DS(ON)}$@10V<12mΩ(Typ. 8.7mΩ)
$R_{DS(ON)}$@4.5V<20mΩ(Typ. 11.5mΩ)
ᅱ ᵀ DHF0T434 ‰́ ӡ ᑊ ˛ớ ˪ ∂ ɩ ῃ ғ ᵝ Qualified to AEC-Q101 Standards for High Reliability, HF Product.

PE2QE2XPSF2YJD ڸ ؤ ڗ ٳ ᴾ ª ℓ ں я ڿ Ω ᴴ / ȉ ڵ GF0GF ↄ ˥ ᏻ / / ڨ U Â ᏠŮ ɩ ◗ ʼ ∩ ڿ
Ẕ ȉ Є ˪ ∂
Kljk luhtxhqf| Srlqw0ri0Ordg V|qfkurqrxv Exfn Frqyhuwhu iru PE2QE2XPSF2YJD/ Qhwz runlqj GF0GF Srzhu V|vwhp/0rdg Vzlwfk, Meet the stringent requirements of automotive applications.





PIN1 χ S1 PIN 2 χ G1 PIN 3 χ S2 PIN 4 χ G2
PIN 5 χ D2 PIN 6 χ D2 PIN 7 χ D1 PIN 8 χ D1

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	12.3	A
Pulsed Drain Current	I_{DM}	46.5	A
Power Dissipation	P_D	3	W
Junction and Storage Temperature Range	T_J,T_{STG}	-55 to +150	
Maximum Junction-to-Ambient	$R_{\theta JA}$(Steady-State)	41.7	/W

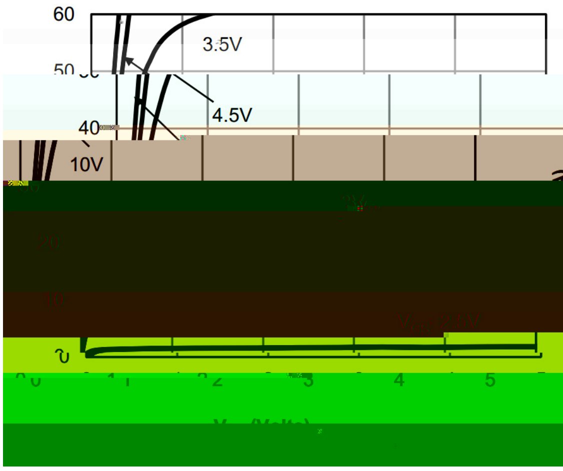
/ Electrical Characteristics(Ta=25)

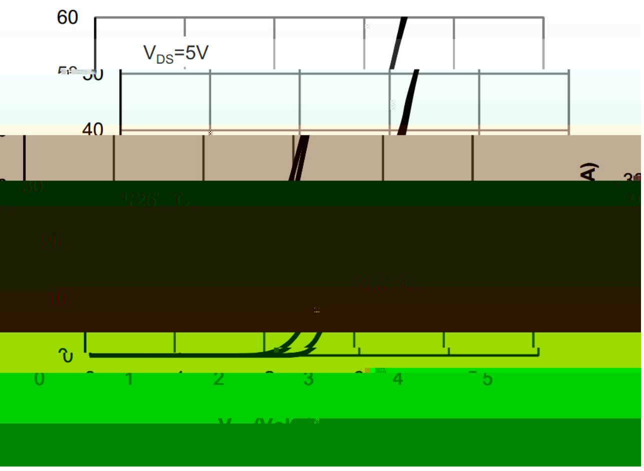
Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V	I_D=250μA	30	36.5		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V	V_{GS}=0V			1	μA
Gate-Body leakage current	I_{GSS}	V_{GS}=±20V	V_{DS}=0V			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}	I_D=250μA	1.0	1.7	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V	I_D=20A		8.7	12	mΩ
		V_{GS}=4.5V	I_D=10A		11.5	20	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		1200		pF
Output Capacitance	C_{oss}				125		pF
Reverse Transfer Capacitance	C_{rss}				100		pF
Gate resistance	R_g	V_{DS}=0V f=1.0MHz	V_{GS}=0V		3.7		Ƒ
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V I_D=20A	V_{DS}=15V		40		nC
Total Gate Charge	$Q_{g(4.5V)}$				22		nC
Gate-Source Charge	Q_{gs}				11		nC
Gate-Drain Charge	Q_{gd}				5		nC

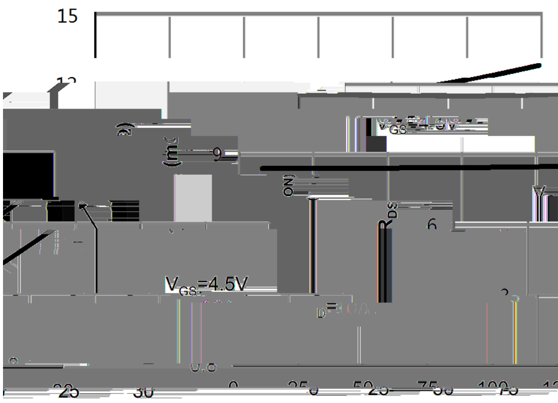
/ Electrical Characteristics(Ta=25)

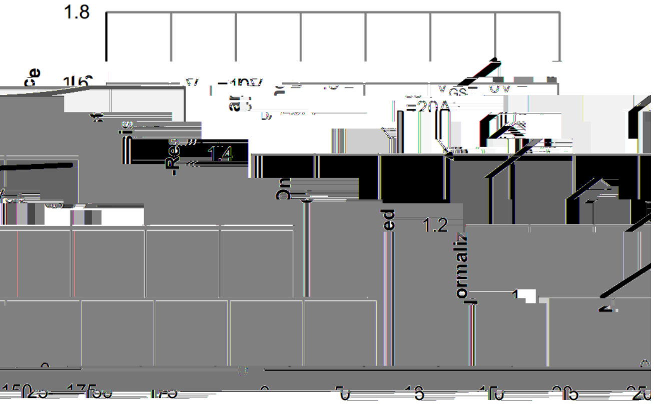
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	V_{DS}=15 V V_{GS}=10V R_L=0.75Ω R_{GEN}=3Ω		11		ns
Turn-On Rise Time	t_r			14		ns
Turn-Off Delay Time	$t_{d(off)}$			38		ns
Turn-Off Fall Time	t_f			10		ns

/ Electrical Characteristic Curve

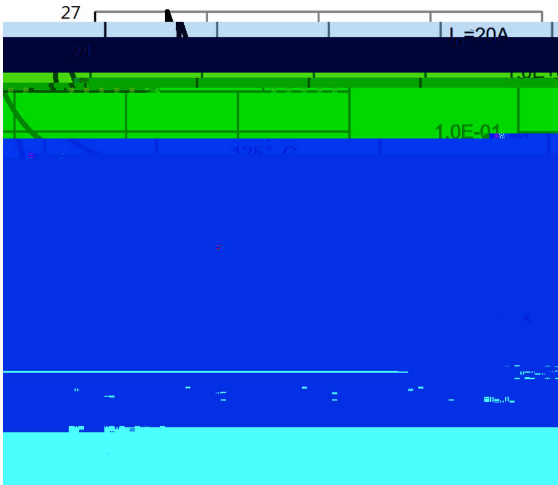


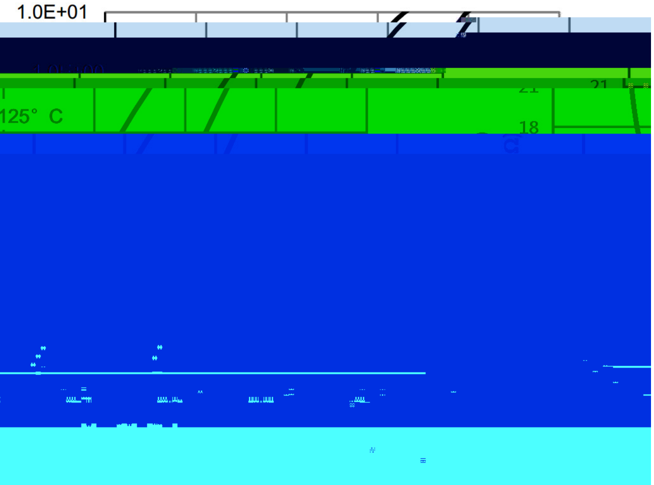






Voltage





/ Electrical Characteristic Curve

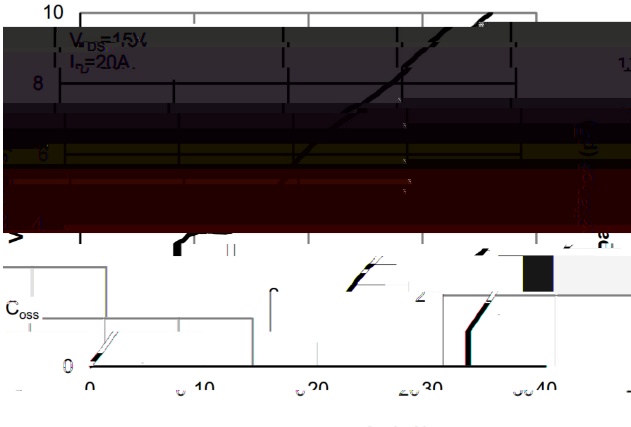


Figure 7: Gate Charge Characteristics

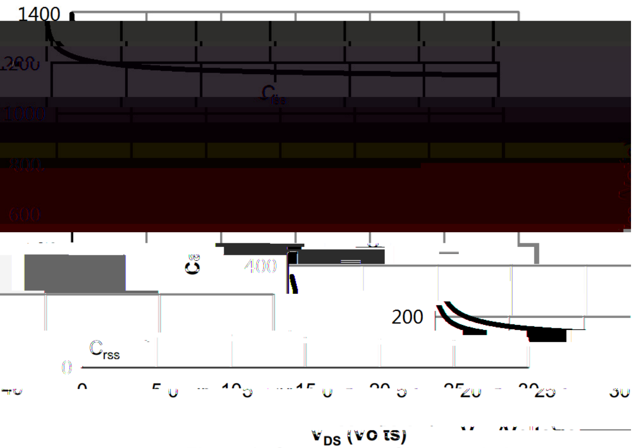


Figure 8: Capacitance Characteristics

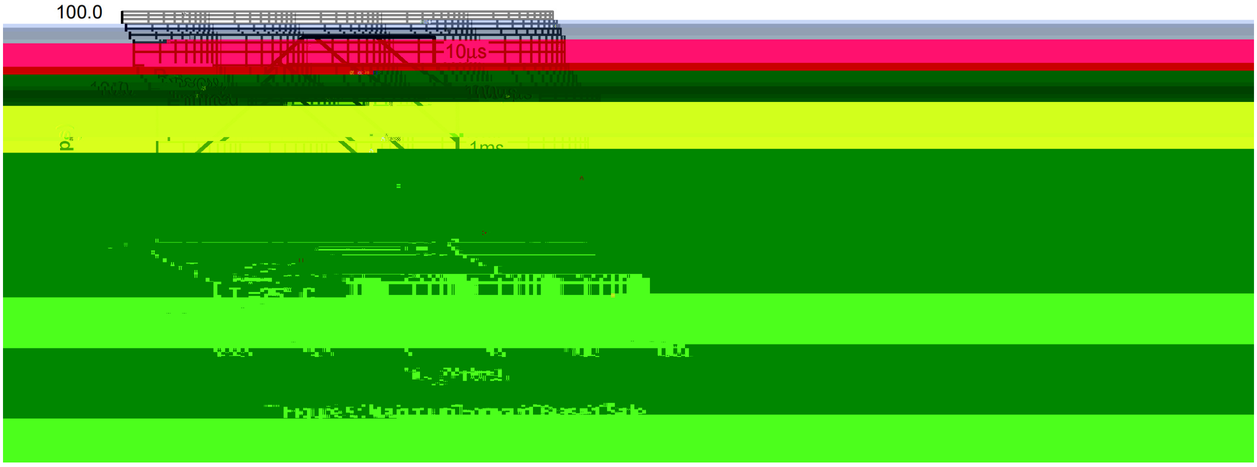


Figure 9: Maximum Forward Biased Safe Operating Area

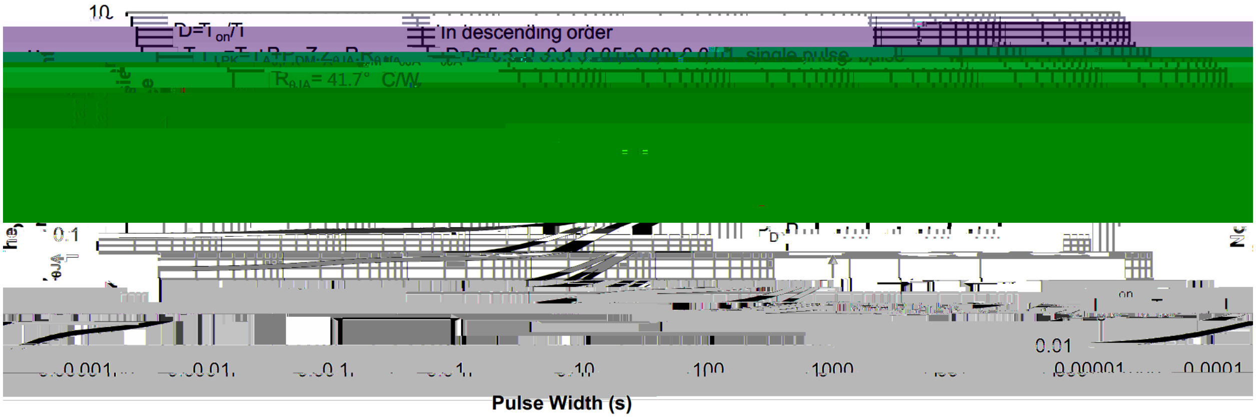
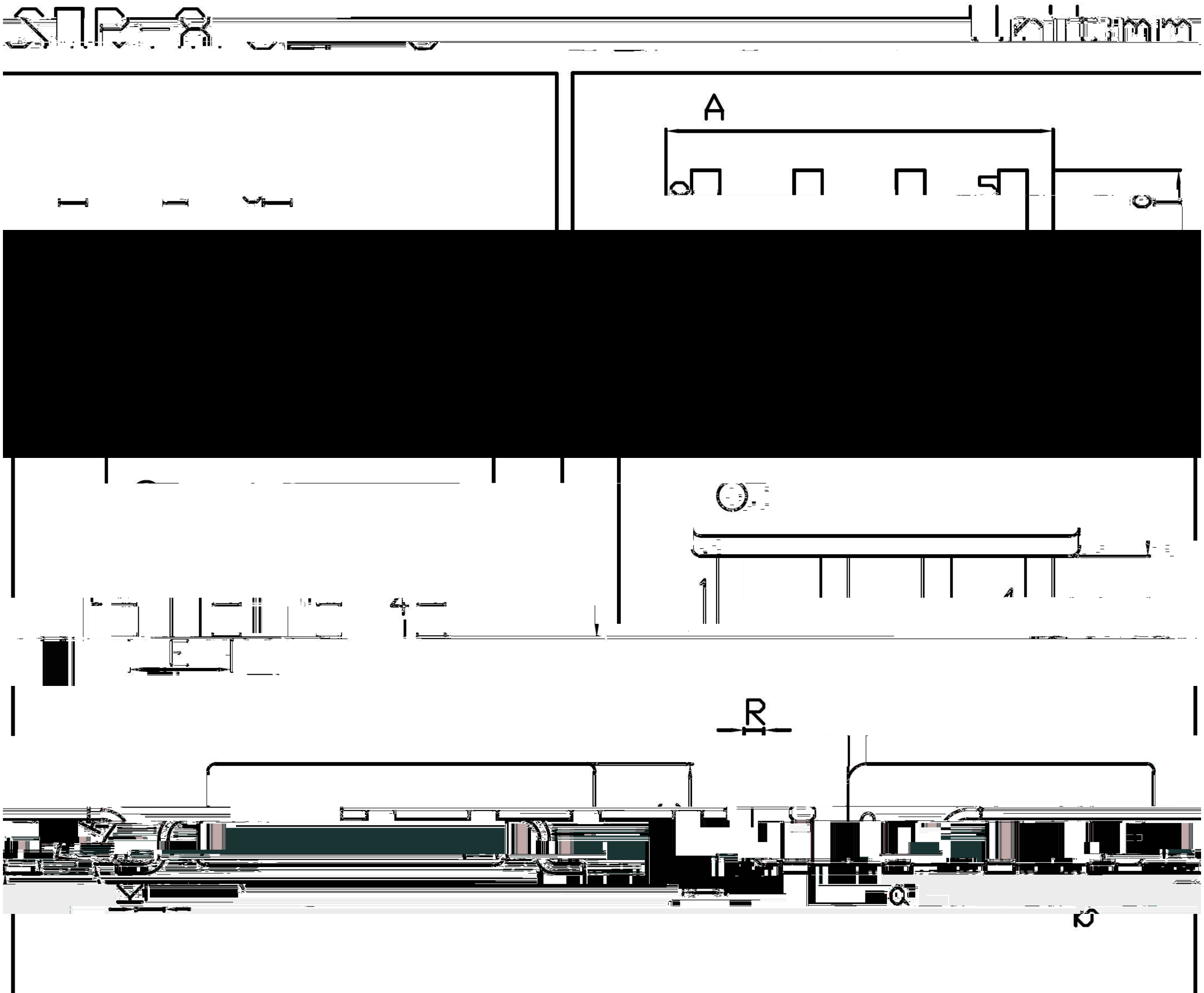


Figure 10: Normalized Maximum Transient Thermal Impedance

/ Package Dimensions

SOP-8 Unit:mm

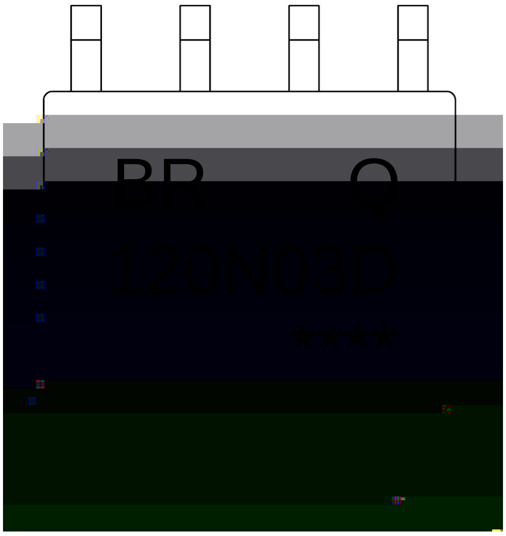


[redacted]

Symbol	Dimensions In Millimeters			Symbol	Dimensions In Millimeters		
	Min	Nom	Max		Min	Nom	Max
A	[illegible]	4.70	5.10	C	[illegible]	1.35	1.75
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[redacted]

/ Marking Instructions



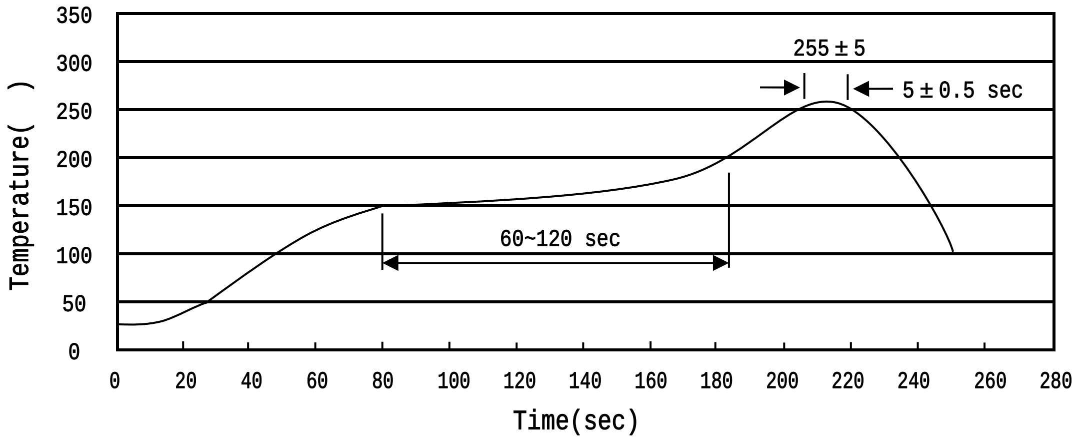
ب ˝ χ

BR χ	ꞁ꜉ ʅ ᴎ ᥰ
Q χ	ꞁ꜉ ∩ ج ὴ ꞙ ᵝ ‰ ᶍ
120N03D χ	ꞁ꜉ ʒ ᴺ ᥰ
**** χ	ꞁ꜉ ꟷ ꞙ ή ᴺ ᥰ ı ɞ ꟷ ꞙ ή ᴺ ψ ק

Note:

BR:	Company Code
Q:	Automobile halogen-free product Code
120N03D:	Product Type Code
****:	Lot No. Code, code change with Lot No

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



ب ˝ χ	Note:
1 ḹ ♬ □ ẙ 150 Ḱ 200 ƚ ı ̀H ڗ 60 Ḱ 120sec;	1.Preheating:150~200 ƚ , Time:60~120sec.
2 Ś Ӫ □ ẙ 255 ° 5 ƚ ı ̀H ڗ ʽY ᛀ ㅉ 5 ° 0.5sec;	2.Peak Temp.:255 ° 5 ƚ , Duration:5 ° 0.5sec.
3 ì ˙ ˥ ˛ ɔ ҩ ẙ ㅉ 2 Ḱ 10 ƚ /sec.	3. Cooling Speed: 2~10 ƚ /sec.

/ Resistance to Soldering Heat Test Conditions

□ ẙ χ 260 ° 5 ƚ　　̀H ڗ χ 10 ° 1 sec.　　Temp.:260±5　　Time:10±1 sec

/ Packaging SPEC.

ᴒ ` ɣ ᒷ / REEL

Package Type	Units					Dimension (unit mm³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
SOP/ESOP-8	4,000	2	8,000	6	48,000	13 ×12	360×360×50	380×335×366

/ Notices