/ Descriptions

TO-220 ĮĮĖ N ŏ MOS ĵ ŵ Ẑ ˥ N-CHANNEL MOSFET in a TO-220 Plastic Package.

/ Features

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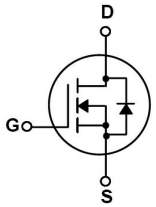
Low gate charge, low crss, fast switching.

/ Applications

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These devices are well suited for high efficiency switching DC/DC converters and switch mode power supplies.

/ Equivalent Circuit



/ Pinning



PIN1 χ G PIN 2 χ D PIN 3 χ S

/ h_{FE} Classifications & Marking

ȏ ᴍ ˥ ب ˝ See Marking Instructions.

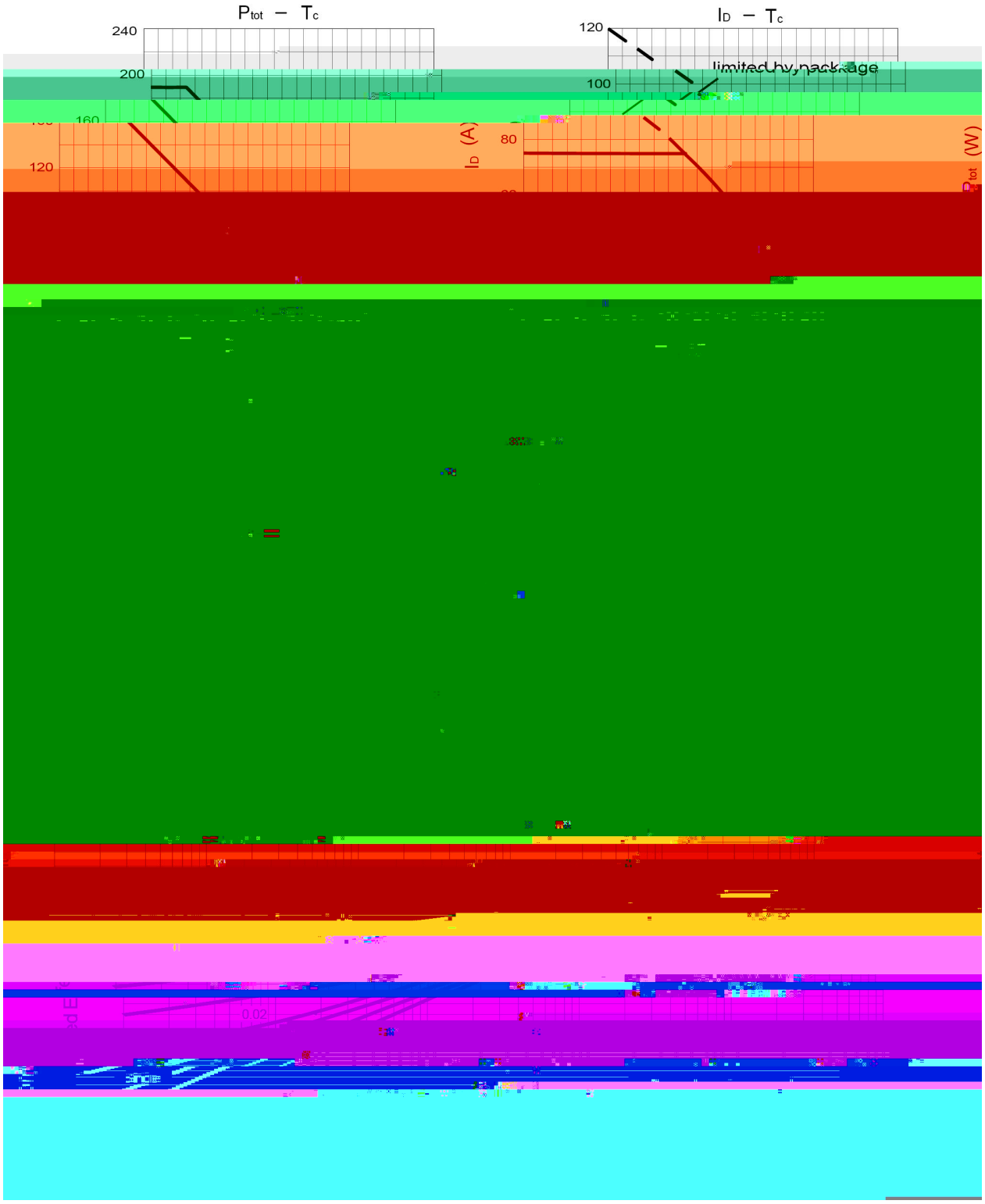
/ Absolute Maximum Ratings(Ta=25)

v ̈Ω Parameter	ϒ N Symbol	̈Ω Ö Rating	D Ꮋ Unit
Drain-Source Voltage	V_{DSS}	60	V
Drain Current	I_D(Tc=25)	100	A
Peak Drain Current	I_{DM}	380	A
Gate-Source Voltage	V_{GSS}	±20	V
Single Pulsed Avalanche Energy	E_{AS}	1.29	J
Avalanche Current	I_{AR}	58.6	A
Total Power Dissipation	P_D(Tc=25)	100	W
Junction and Storage Temperature Range	T_J,T_{STG}	-55 to 150	

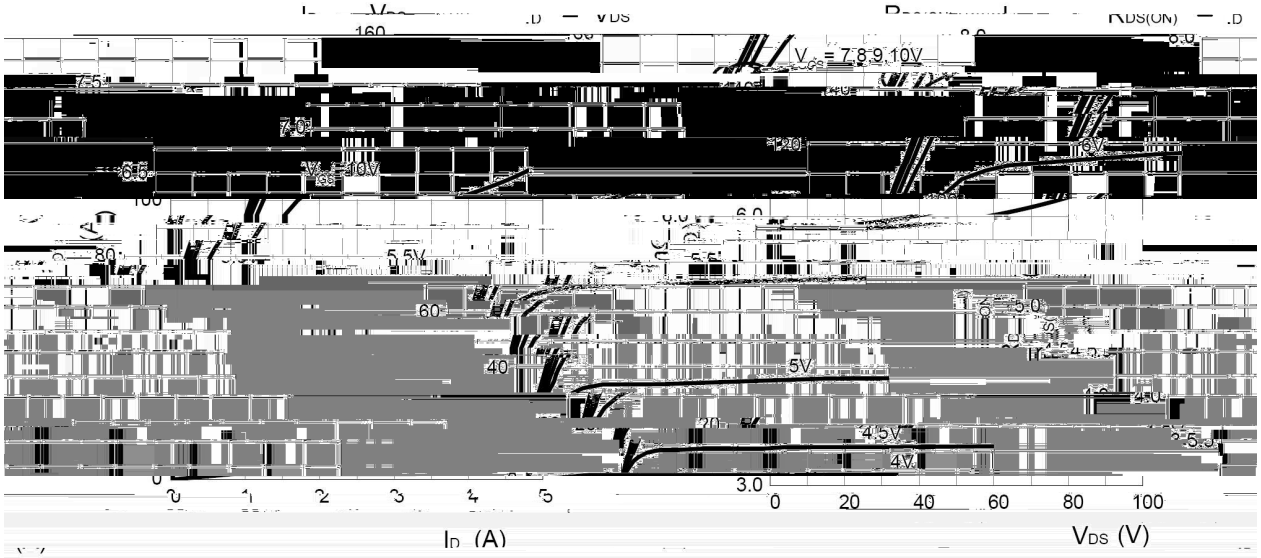
/ Electrical Characteristics(Ta=25)

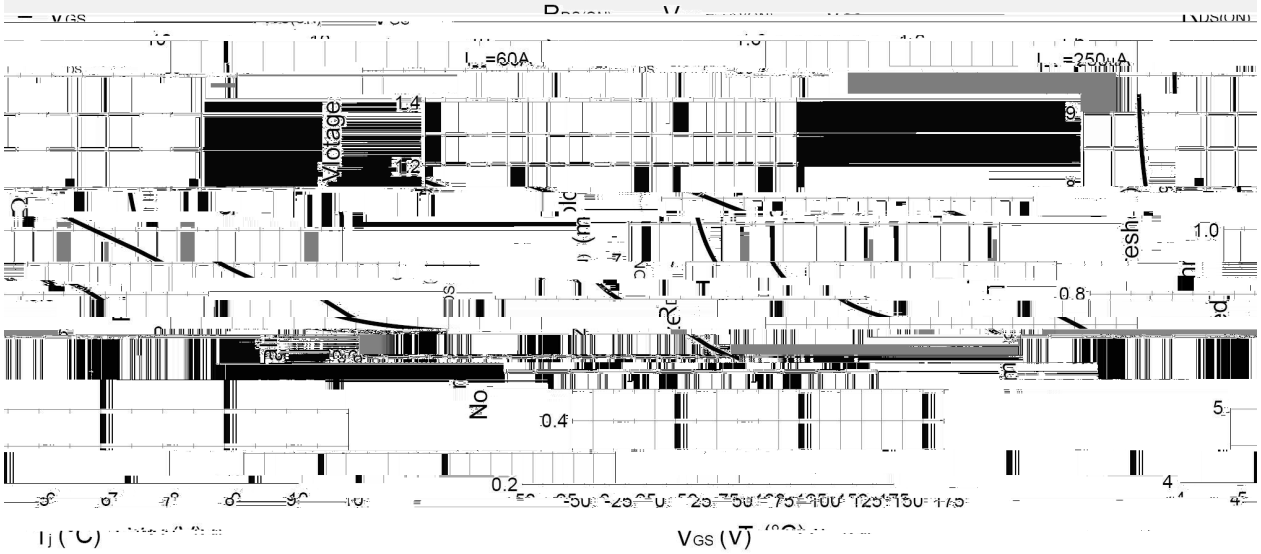
v ̈Ω Parameter	ϒ N Symbol	⅄ ⁝ ↾ Ꞇ Test Conditions	ѡ ṇ Ö Min	Ɛ ʒ Ö Typ	ѡ ᶻ Ö Max	D Ꮋ Unit
Zero Gate Voltage Drain Current	BV_{DSS}	V_{GS}=0V I_D=250μA	60			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=60V V_{GS}=0V			1	μA
		V_{DS}=60V V_{GS}=0V T_J=85			30	μA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±20V V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250μA	2.0		4.0	V
Forward On Voltage	V_{SD}	I_S=90A V_{GS}=0V			1.2	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V I_D=90A		8.0	10	mΩ
Gate Resistance	R_G	V_{GS}=0V V_{DS}=0V Frequency=1MHz		1.7		Ω
Input Capacitance	C_{iss}	V_{GS}=0V f=1.0MHz V_{DS}=25V		3160		pF
Output Capacitance	C_{oss}			752		pF
Reverse Transfer Capacitance	C_{rss}			190		pF
Total Gate Charge	Q_G	V_{DS}=30V V_{GS}=10V I_D=60A		96		nC
Gate Source Charge	Q_{GS}			21		nC
Gate Drain Charge	Q_{GD}			23		nC
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=30V I_D=60A R_{GEN}=6Ω V_{GS}=10V		13	26	ns
Turn-On Rise Time	t_r			11	20	ns
Turn-Off Delay Time	$t_{d(off)}$			40	66	ns
Turn-Off Fall Time	t_f			60	95	ns

/ Electrical Characteristic Curve

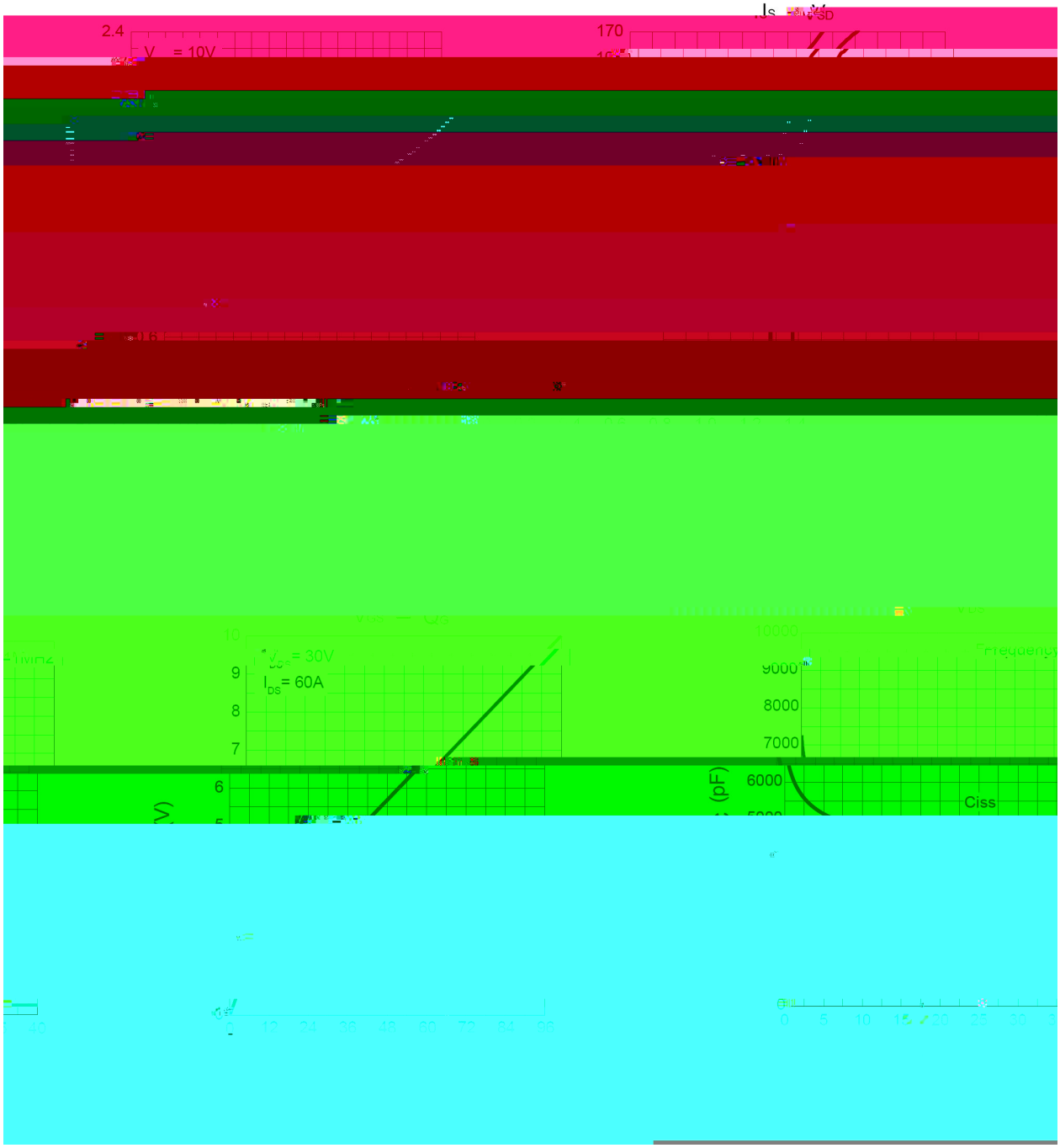


/ Electrical Characteristic Curve



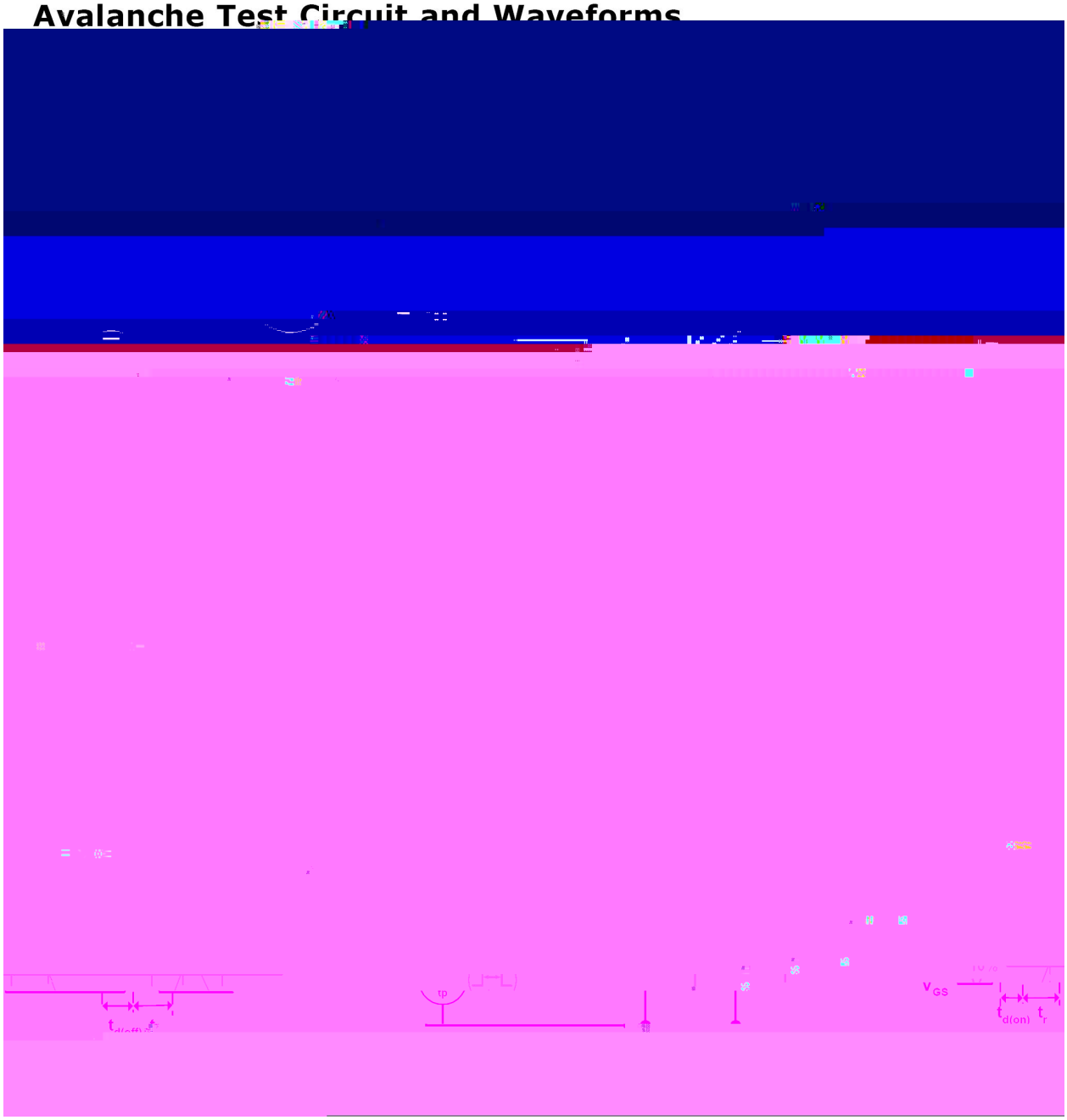


/ Electrical Characteristic Curve

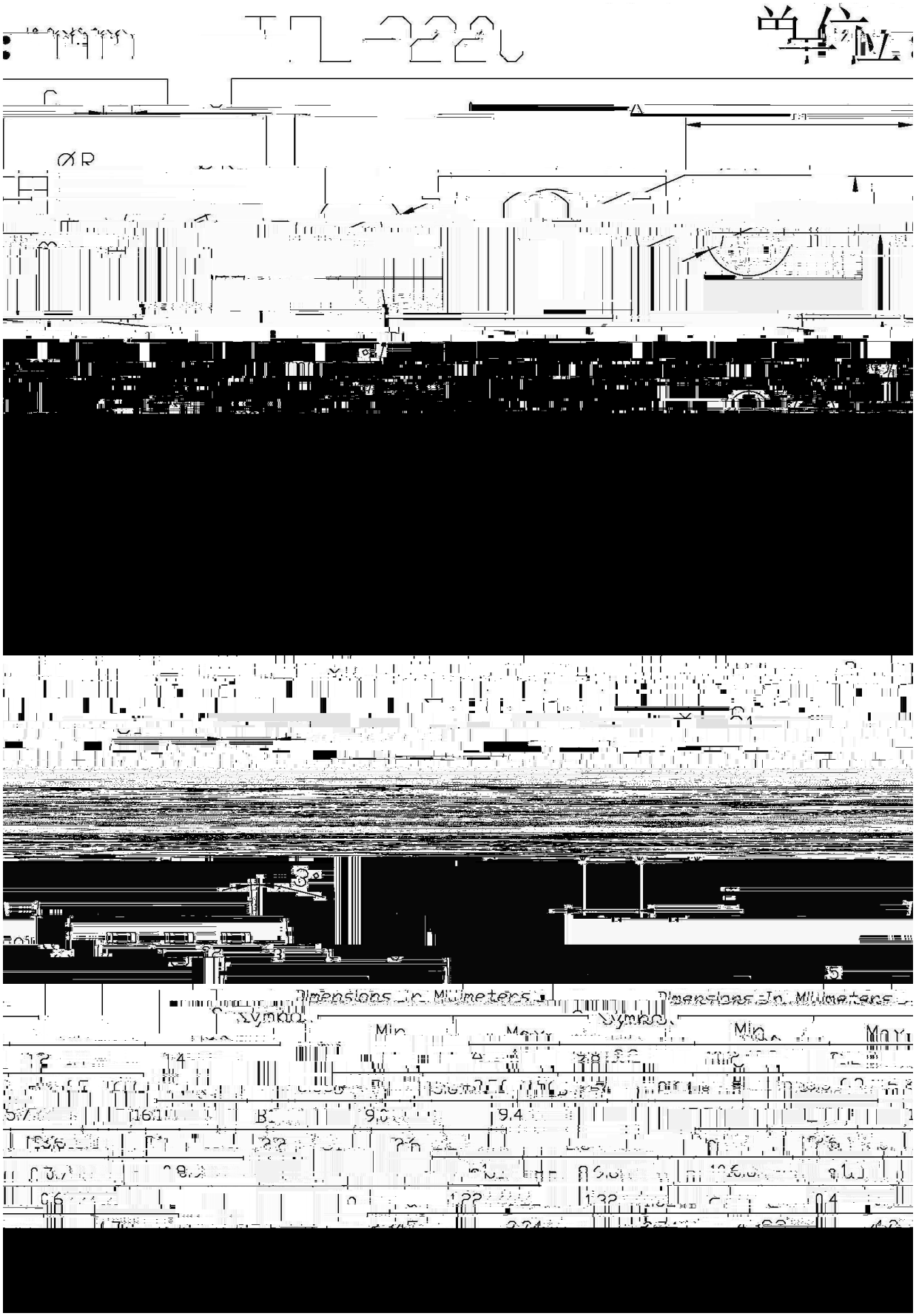


/ Test Circuit and Waveforms

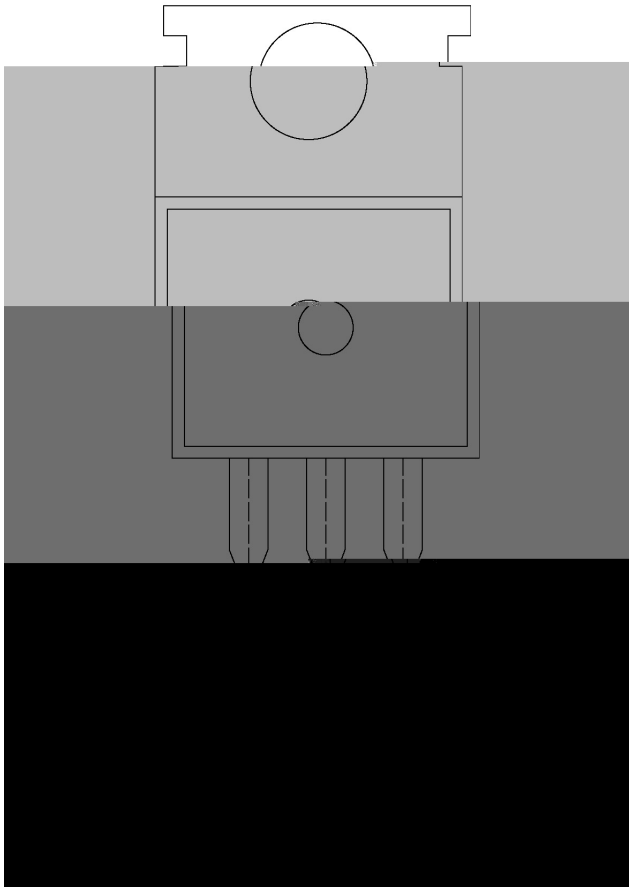
Avalanche Test Circuit and Waveforms



/ Package Dimensions



/ Marking Instructions



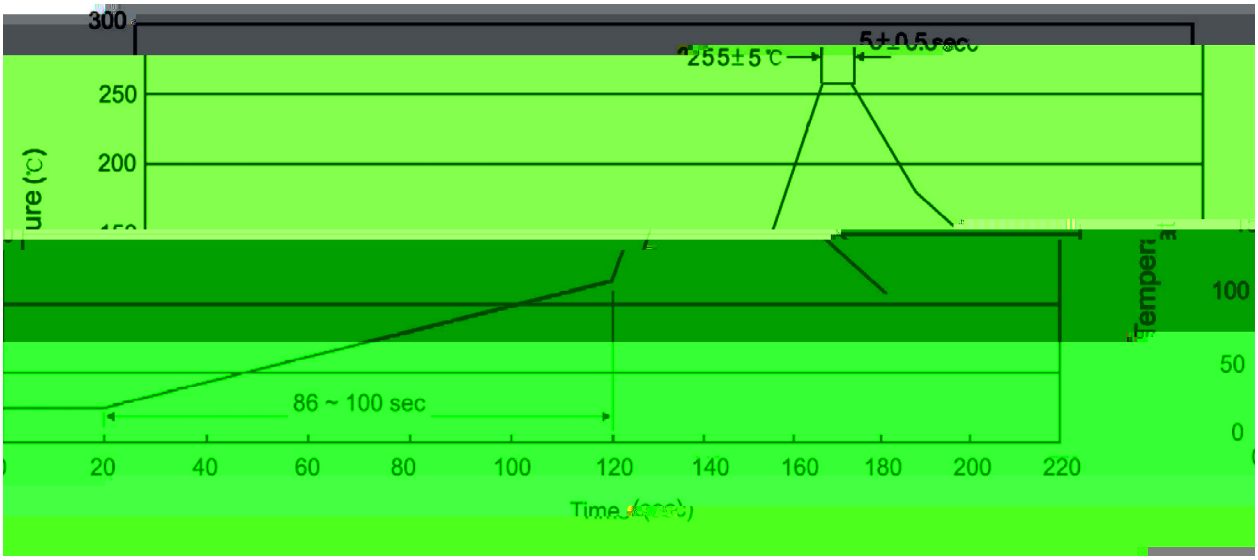
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BR χ	ʜʀ ʒ ᴎ ᒣ
433Q39 χ	ʜʀ ȝ ᴺ ᒣ
---- χ	ʜʀ ɨ ғ ᾐ ᴺ ᒣ ɪ ɕ ɨ ғ ᾐ ᴺ Ψ ᖘ

Note:

BR:	Company Code
100N06:	Product Type.

( ) / Temperature Profile for Dip Soldering(Pb-Free)



ب ˝ χ

1 Ĺ ♬ □ ỷ 25 Ḱ 150 ł ı ˋH ڑ 60 Ḱ 90sec;

2 Š Ө □ ỷ 255 ° 5 ł ı ˋH ڑ ˋY ﾊ ㎞ 5 ° 0.5sec;

3 ì ˙ ﾘ ˛ ɔ ﻉ ỷ ㎞ 2 Ḱ 10 ł /sec.

Note:

1.Preheating:25~150 ł , Time:60~90sec.

2.Peak Temp.:255 ° 5 ł , Duration:5 ° 0.5sec.

3. Cooling Speed: 2~10 ł /sec.

/ Resistance to Soldering Heat Test Conditions

□ ỷ χ 270 ° 5 ł ˋH ڑ χ 10 ° 1 sec. Temp.:270±5 Time:10±1 sec

/ Packaging SPEC.

ˈQ ţ ﾔ Ł / BULK

Package Type	Units					Dimension		(unit mm³)

˛ ﾘ ﾔ Ł / TUBE

Package Type	Units					Dimension		(unit mm³)