/ Descriptions

TO-252 N MOS N-CHANNEL MOSFET in a TO-252 Plastic Package.

/ Features

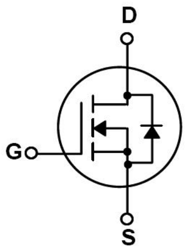
100%

Low gate charge, low R_{dson}, fast switching, Low Reverse transfer capacitances,100% Single Pulse avalanche energy Test.

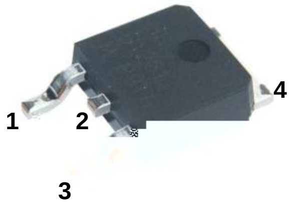
/ Applications

Power switch circuit of Video doorphone.

/ Equivalent Circuit



/ Pinning



PIN1 G PIN 2 D PIN 3 S PIN 4 D

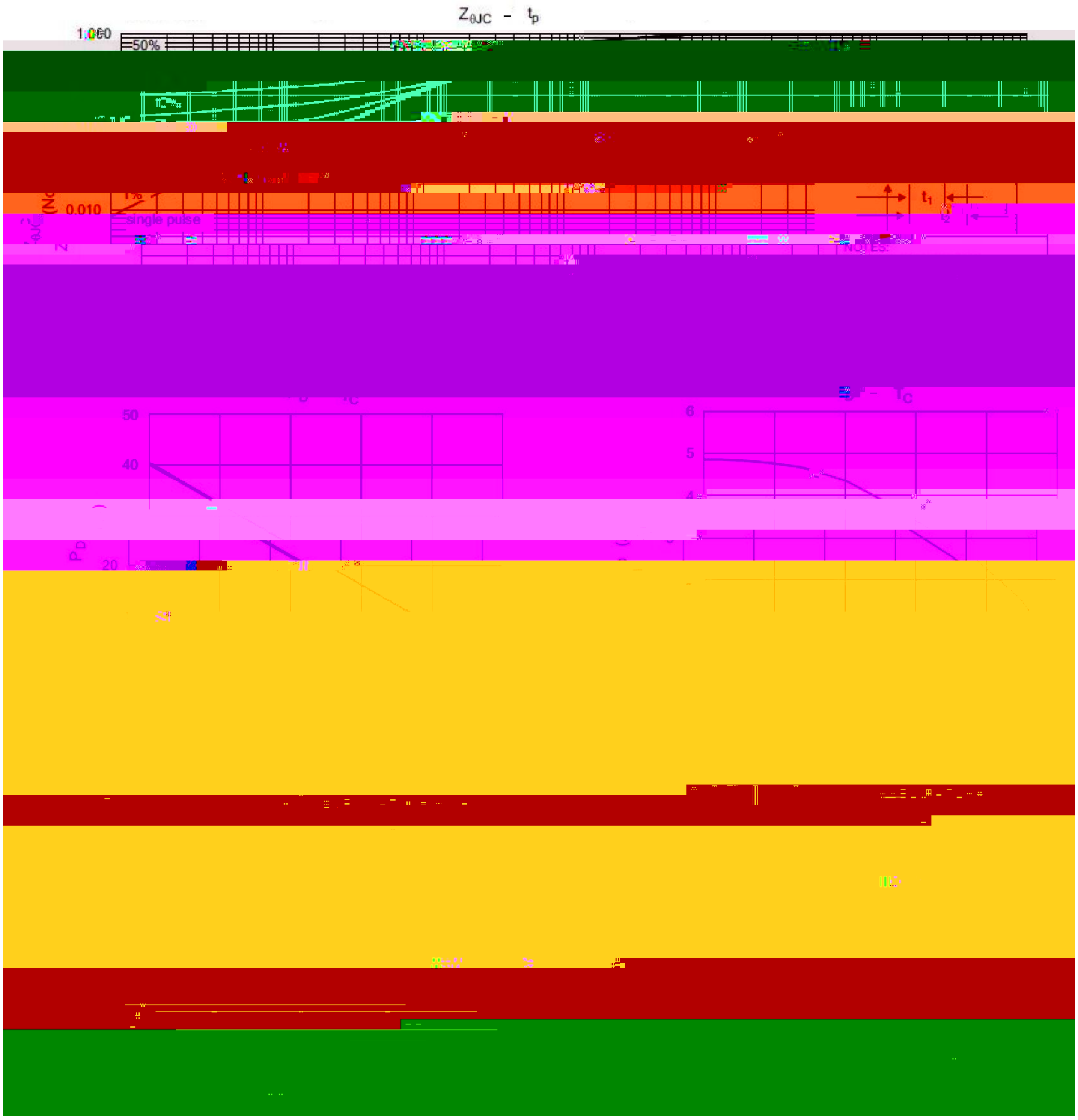
/ h_{FE} Classifications & Marking

See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	200	V
Drain Current	I_D(Tc=25)	4.8	A
Drain Current	I_D(Tc=100)	3.4	A
Drain Current - Pulsed	I_{DM}^{a1}	19.2	A
Gate-Source Voltage	V_{GSS}	±30	V
Avalanche Current	I_{AR}^{a1}	1.6	A
Single Pulsed Avalanche Energy	E_{AS}^{a2}	125	mJ
Repetitive Avalanche Energy	E_{AR}^{a1}	12	mJ
Power Dissipation	P_D(Tc=25)	40	W
Derating Factor above 25	P_D	0.32	W/
Peak Diode Recovery dv/dt	dv/dt^{a3}	5	V/ns

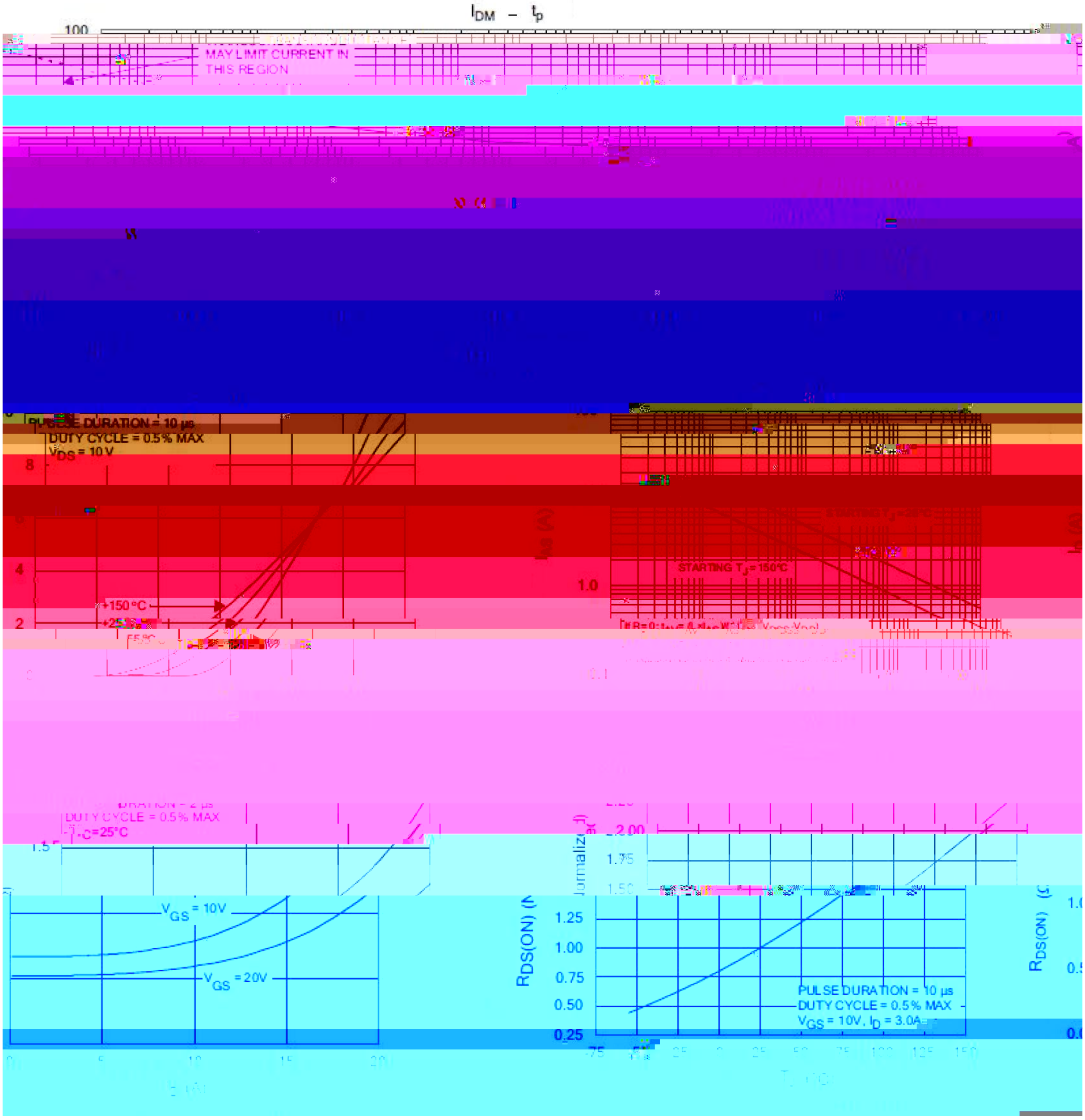
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1MHz		255		pF
Output Capacitance	C_{oss}			52		pF
Reverse Transfer Capacitance	C_{rss}			8		pF
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=100V I_D=4.8A R_G=10Ω V_{GS}=10V		7		ns
Turn-On Rise Time	t_r			13		ns
Turn-Off Delay Time	$t_{d(off)}$			27		ns
Turn-Off Fall Time	t_f			11		ns
Total Gate Charge	Q_g	V_{DD}=100V I_D=4.8A V_{GS}=10V		7		nC
Gate to Source Charge	Q_{gs}			2		nC
Gate to Drain (“ Miller ”)Charge	Q_{gd}			3		nC
Continuous Source Current (Body Diode)	I_S					

/ Electrical Characteristic Curve

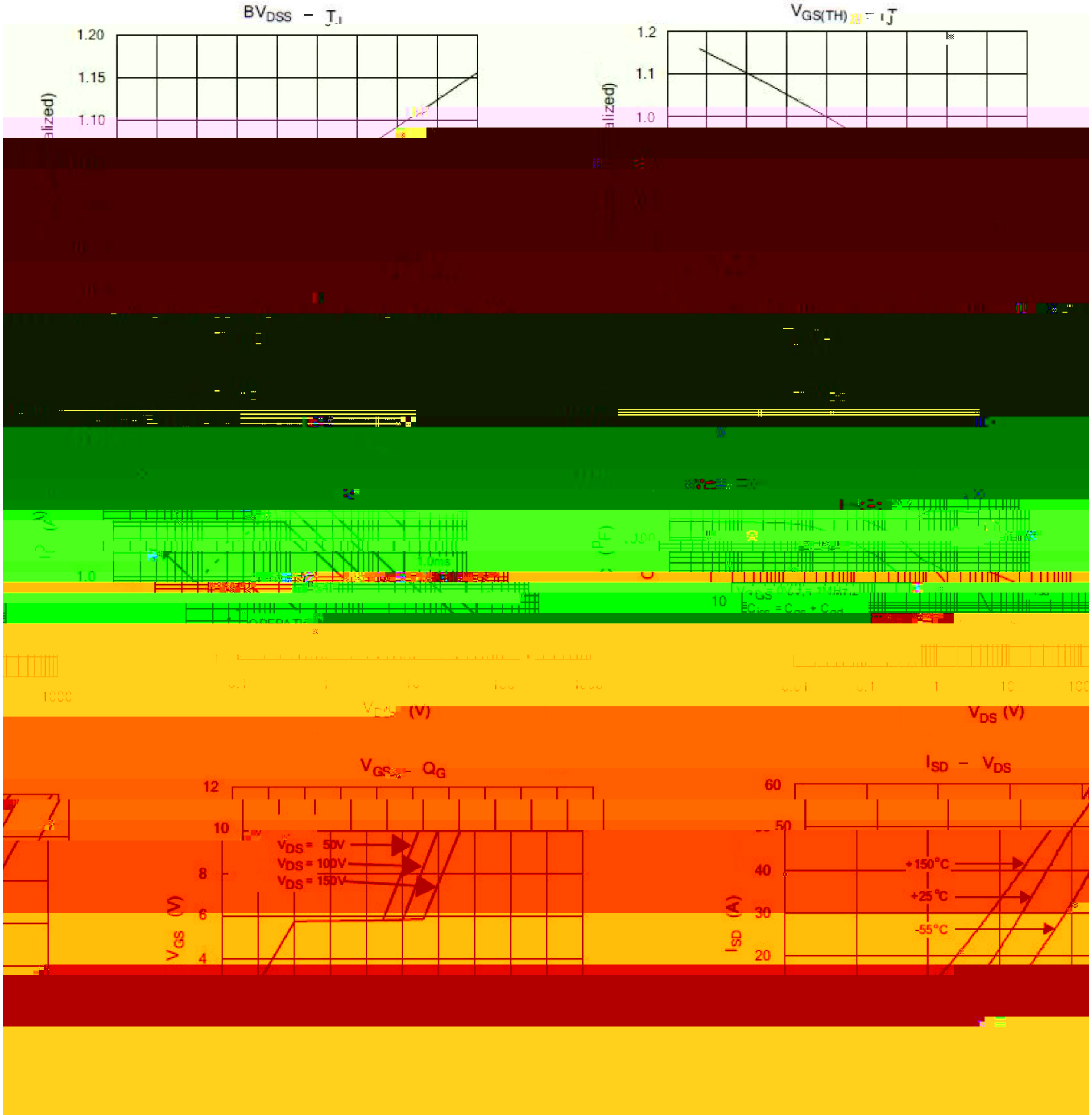


/ Electrical Characteristic Curve

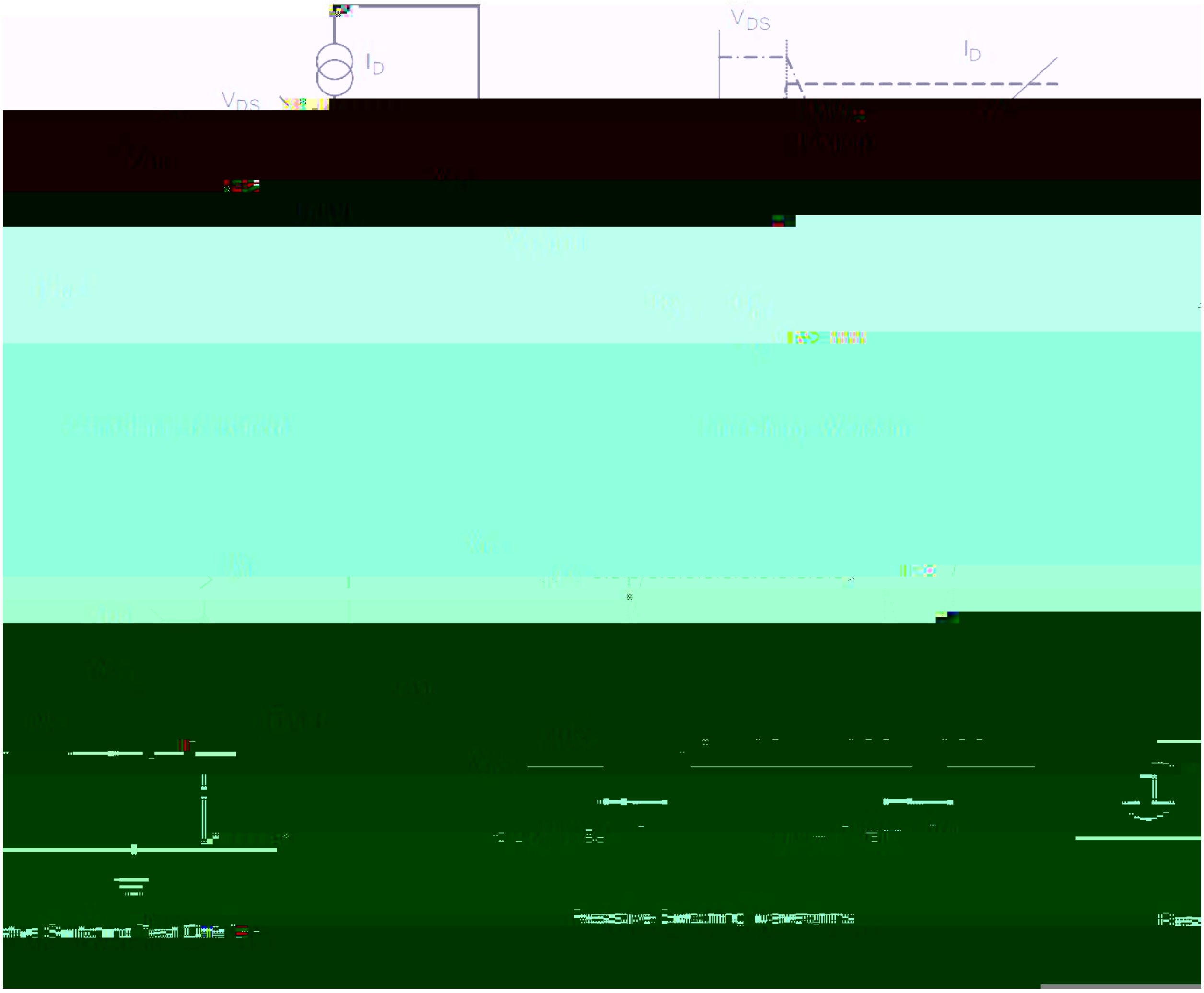
I_{DM} – t_p



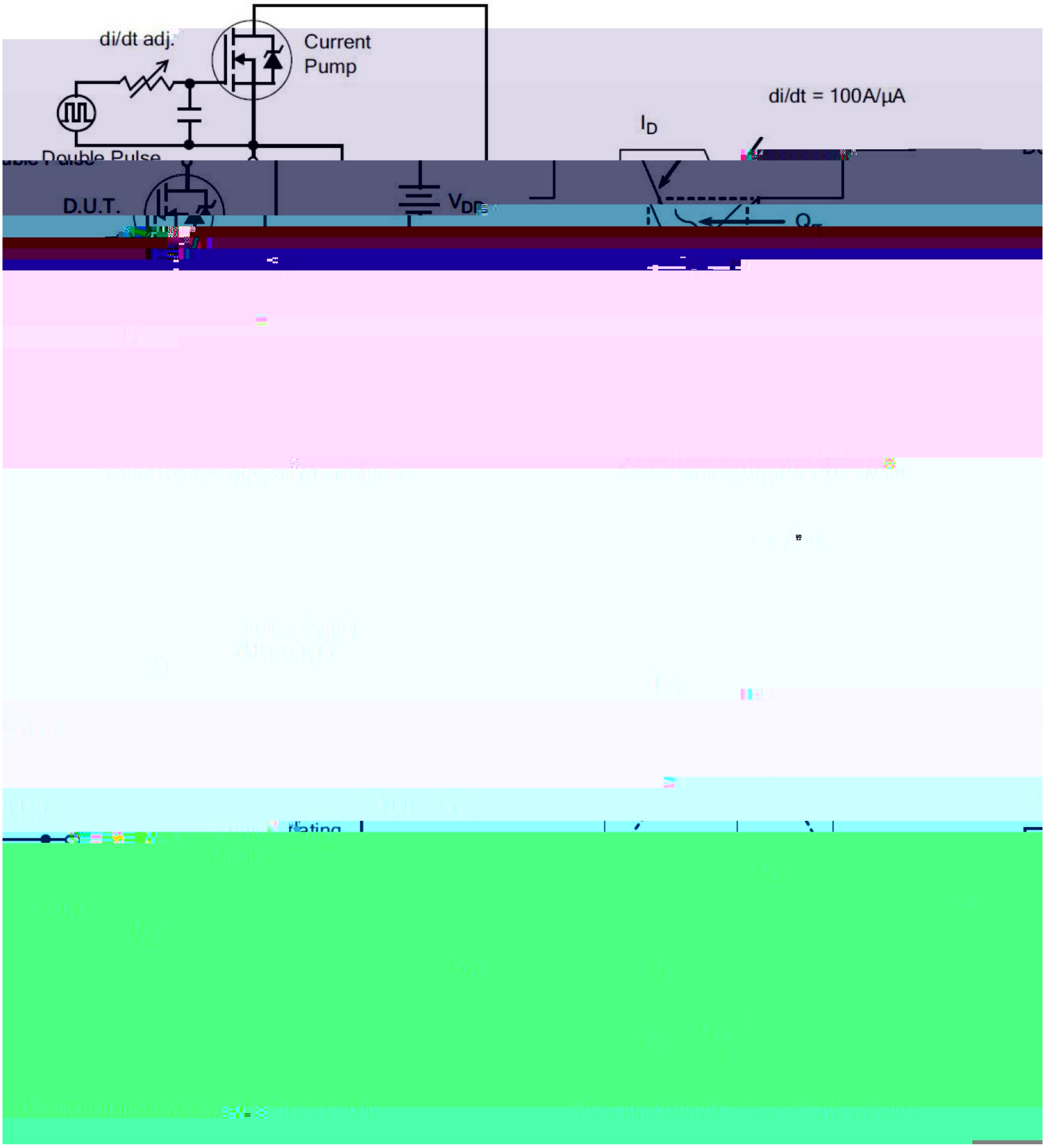
/ Electrical Characteristic Curve



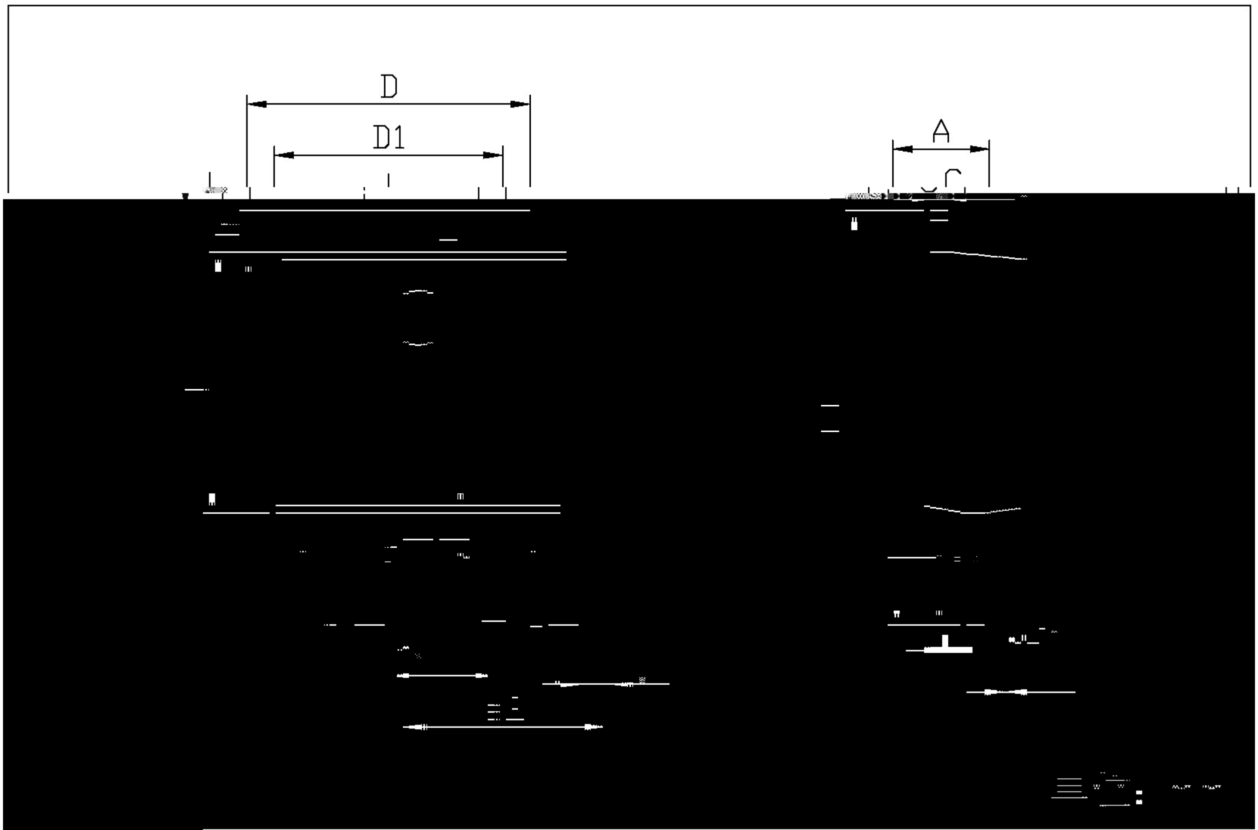
/ Test Circuitand Waveform



/ Test Circuitand Waveform

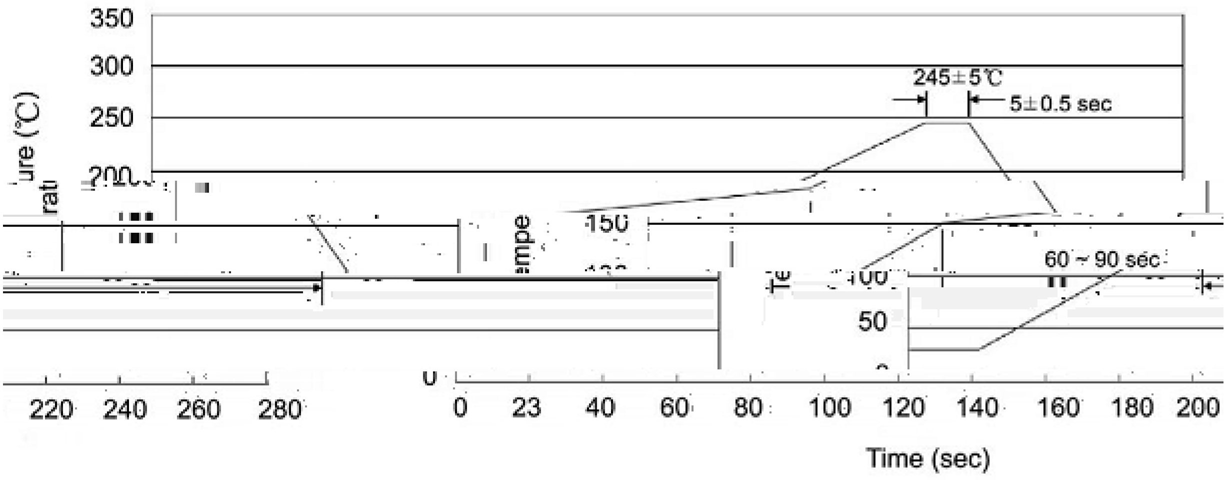


/ Package Dimensions



[illegible]

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



1 25 150 60 90sec;

2 245±5 5±0.5sec;

3 2 10 /sec.

Note:

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

2.Peak Temp.:245±5 , Duration:5±0.5sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

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