/ Descriptions

SOP-8 P MOS
P-Channel Enhancement Mode Field Effect Transistor in a SOP-8 Plastic Package.

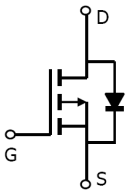
/ Features

V_{DS} (V) = -30V
I_D = -8.8 A
$R_{DS(ON)}$ < 23mΩ (V_{GS} = -10V)
$R_{DS(ON)}$ < 35mΩ (V_{GS} = -4.5V)
HF Product.

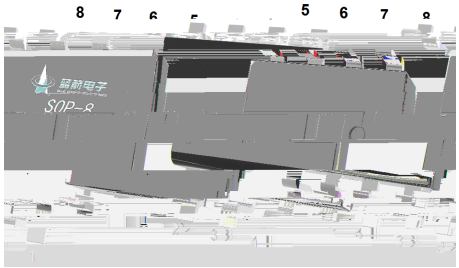
/ Applications

Power Management in Notebook computer, Portable Equipment and Battery powered systems.

/ Equivalent Circuit



/ Pinning



PIN1	S	PIN 2	S	PIN 3	S	PIN 4	G
PIN 5	D	PIN 6	D	PIN 7	D	PIN 8	D

/ Marking

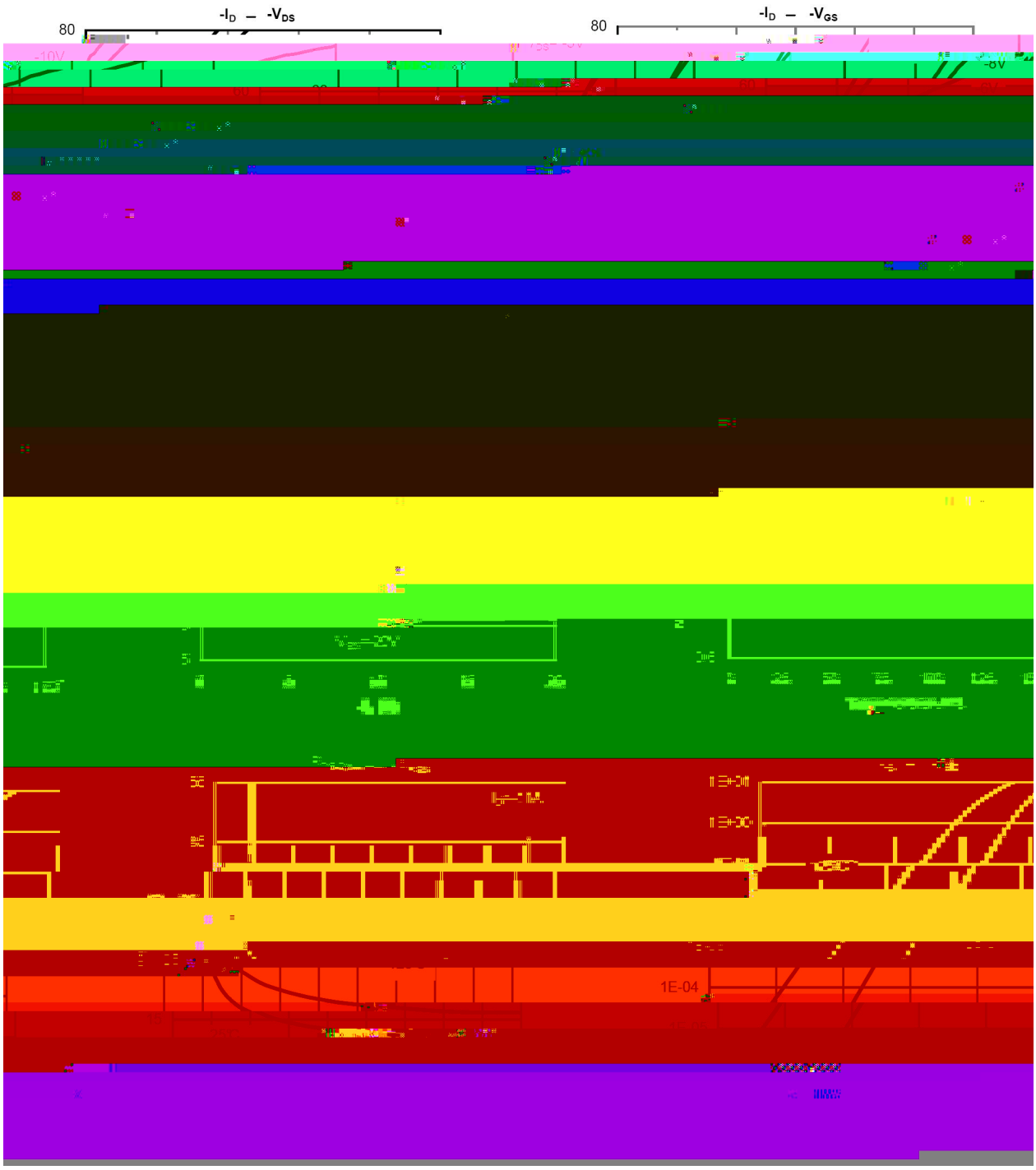
See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	-30	V
Gate-Source Voltage	V_{GSS}	±20	V
Continuous Drain Current[A]	I_D (T_a=25°C)	-8.8	A
Continuous Drain Current[A]	I_D (T_a=70°C)	-7.0	A
Pulsed Drain Current[B]	I_{DM}	-50	A
Power Dissipation for Single Operation[A]	P_D (T_a=25)	2.5	W
Power Dissipation for Single Operation[A]	P_D (T_a=70)	1.2	W
Avalanche Current	I_{AR}	-20	A
Repetitive avalanche energy 0.3mH[B]	E_{AR}	50	mJ
Maximum Junction Temperature	T_j	150	

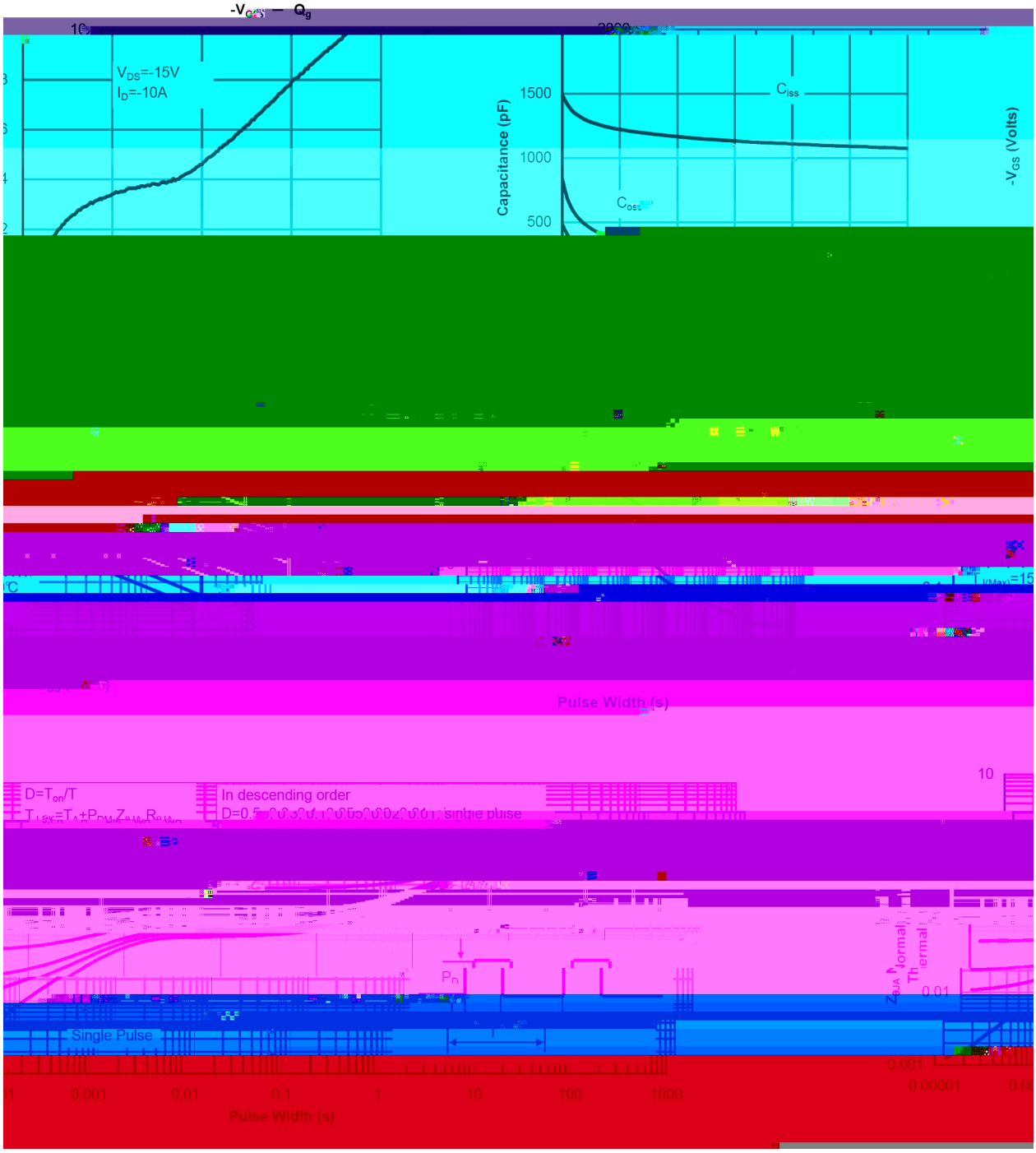
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=-250μA V_{GS}=0V	-30			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-30V V_{GS}=0V			-1.0	μA
		V_{DS}=-30V V_{GS}=0V T_J=55°C			-5.0	
Gate-Body leakage current	I_{GSS}	V_{DS}=0V V_{GS}=±20V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=VGS I_D=-250μA	-1.0	-1.7	-3.0	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=-10V I_D=-8.8A		18	23	mΩ
		V_{GS}=-10V I_D=-8.8A T_J=125°C		25	32	
		V_{GS}=-4.5V I_D=-6.7A		27	35	
Forward Transconductance	g_{FS}	V_{DS}=-5V I_D=-8.8A		12		S
Diode Forward Voltage	V_{SD}	I_S=-2.1A V_{GS}=0V		-0.73	-1.2	V
Maximum Body-Diode Continuous Current	I_S				-2.1	A
Total Gate Charge	Q_g	V_{GS}=-5V V_{DS}=-15V I_D=-8.8A		17	24	nC
Gate-Source Charge	Q_{gs}			5		
Gate-Drain Charge	Q_{gd}			6		
Input Capacitance	C_{iss}	V_{GS}=0V V_{DS}=-15V f=1MHz		1604		pF
Output Capacitance	C_{oss}			408		
Reverse Transfer Capacitance	C_{rss}			202		
Turn-on Delay Time	$t_{d(ON)}$	V_{GS}=-10V V_{DS}=-15V I_D=-1A R_{GEN}=6Ω		13	23	ns
Turn-on Rise Time	t_r			13.5	24	
Turn-off Delay Time	$t_{d(OFF)}$			42	68	
Turn-off Fall Time	t_f			25	40	

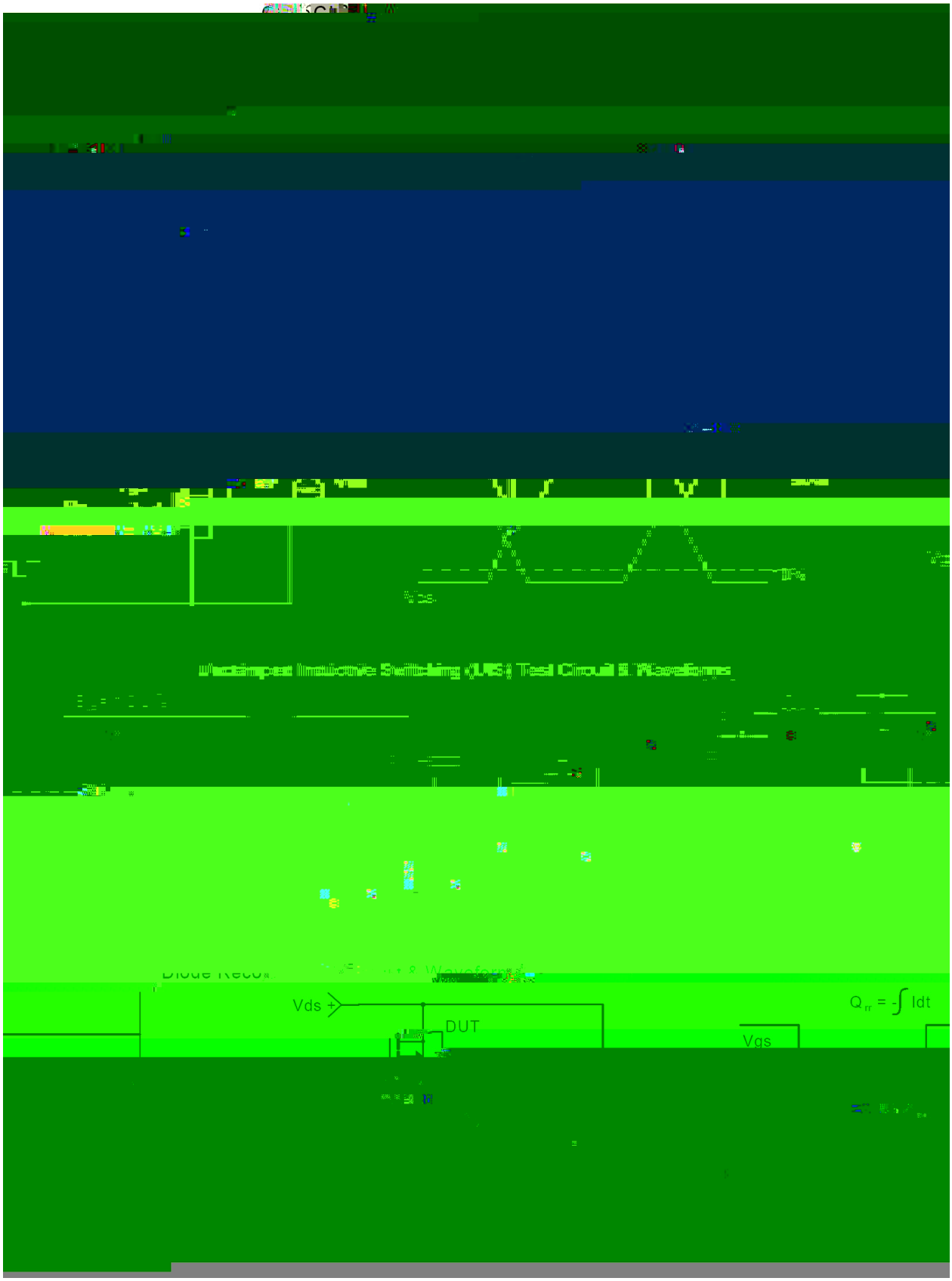
/ Electrical Characteristic Curve



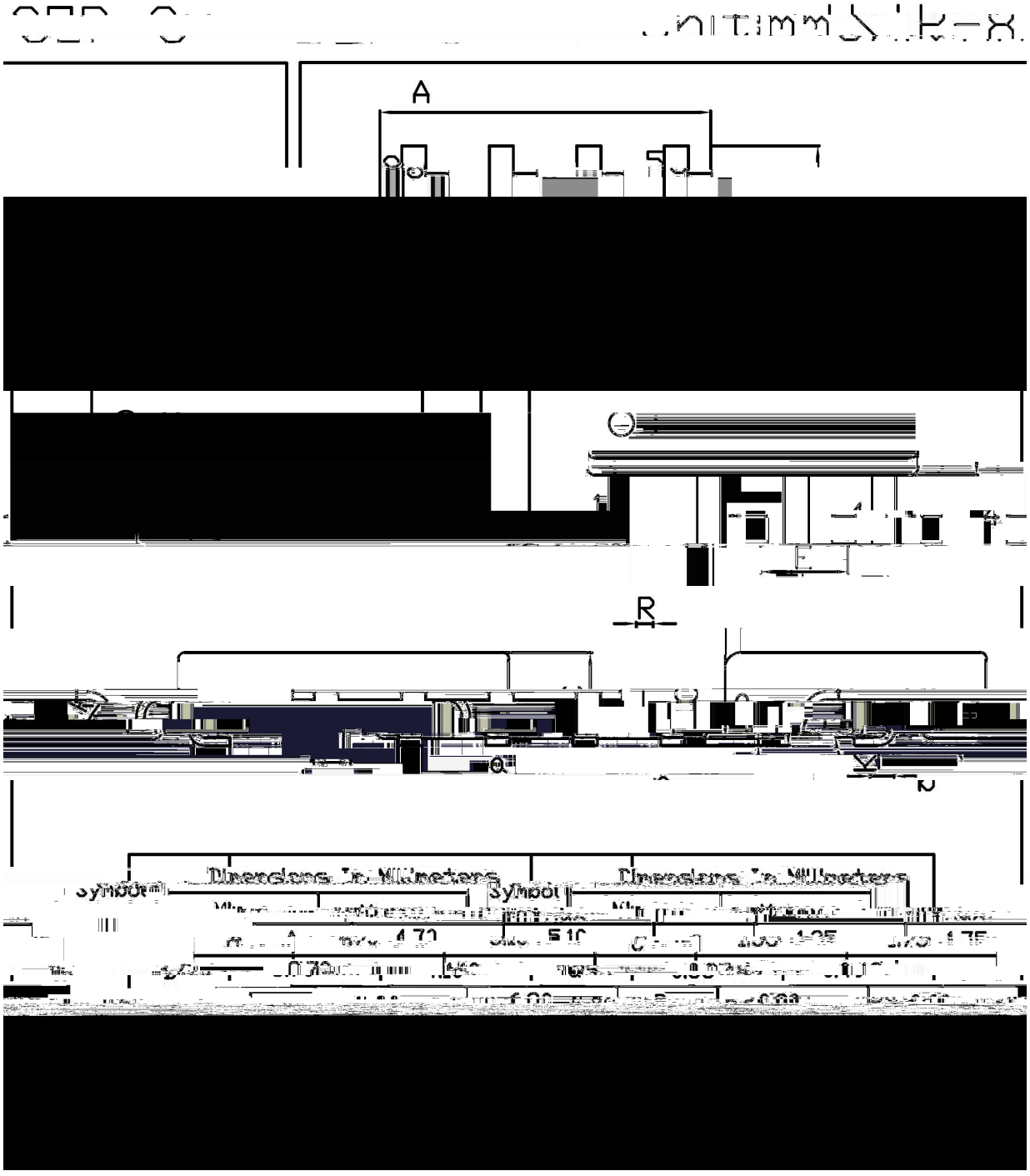
/ Electrical Characteristic Curve



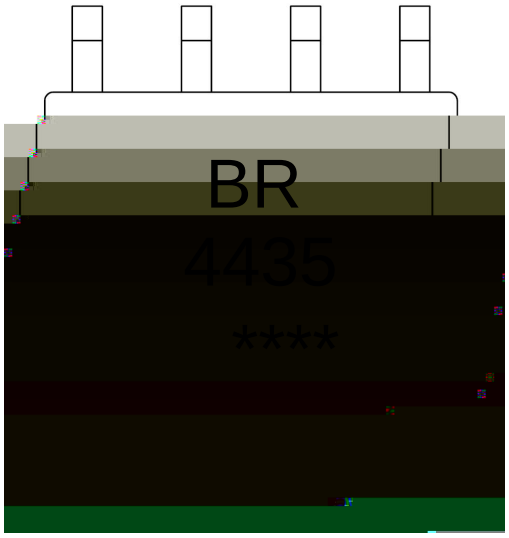
/ Test Waveform



/ Package Dimensions



/ Marking Instructions



BR

4435

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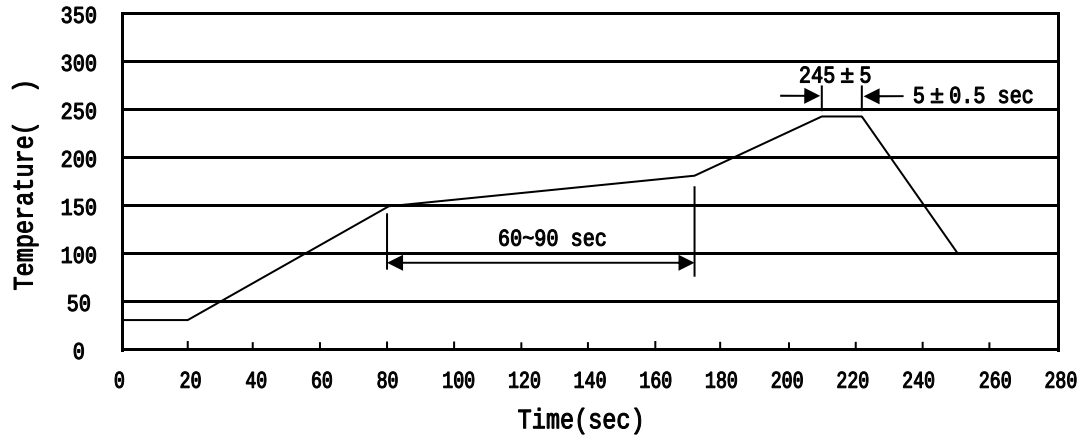
Note:

BR:	Company Code
4435:	Product Type Code
****:	Lot No. Code, code change with Lot No

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



			Note:
1	150 180	60 90sec;	1.Preheating:150~180 , Time:60~90sec.
2	245±5	5±0.5sec;	2.Peak Temp.:245±5 , Duration:5±0.5sec.
3	2 10	/sec.	3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5	10±1 sec.	Temp.:260±5	Time:10±1 sec

/ Packaging SPEC.

/ 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