SOP-8 P [illegible]

P-Channel Power Trench MOSFET in a SOP-8 Plastic Package.

$R_{DS\ ON}$

Low gate charge, Fast switching speed, High performance trench technology for extremely, low $R_{DS(ON)}$, High power and current handling capability. Halogen-free Product.

Power management, Load switch, Battery protection.

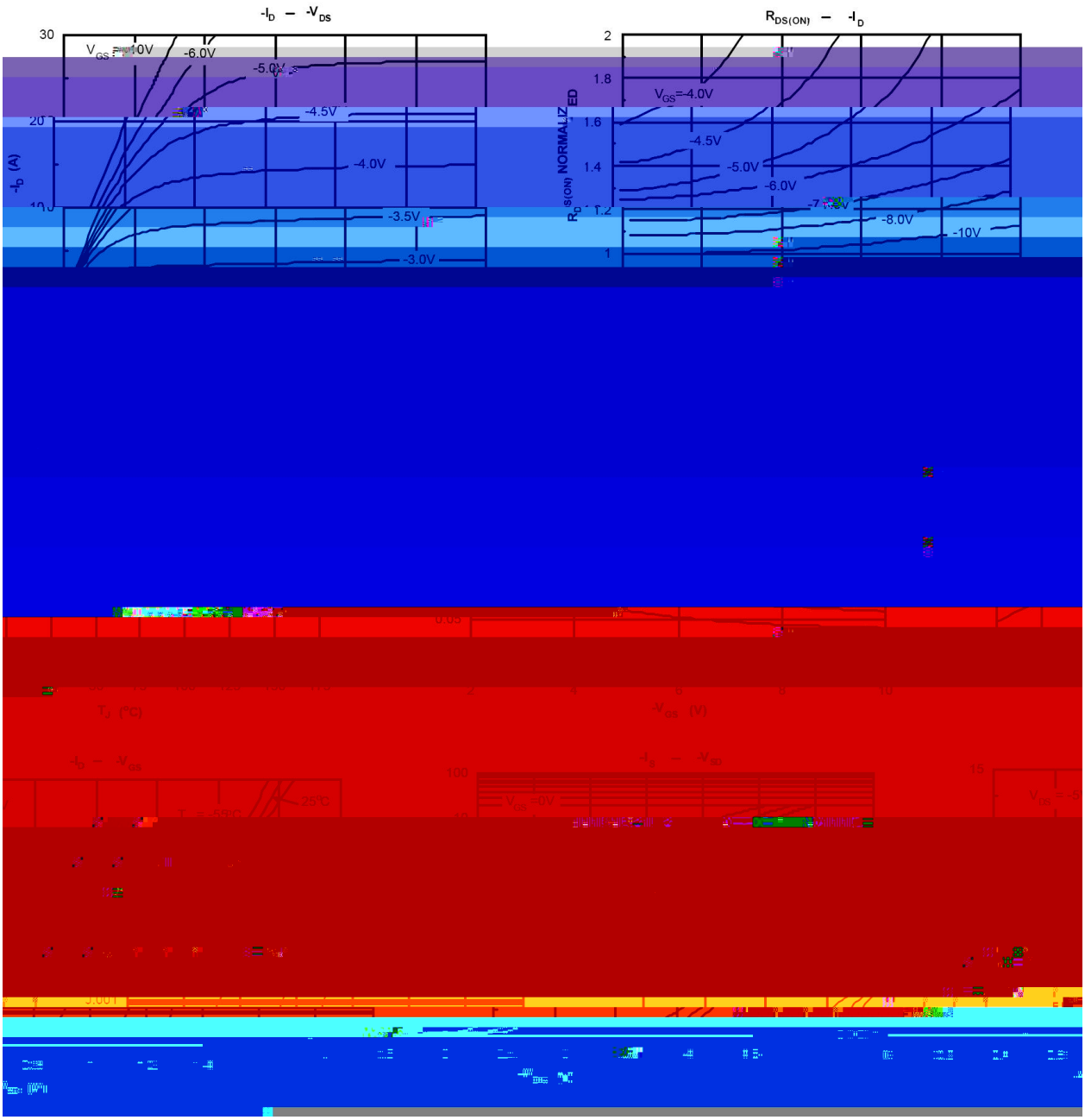
PIN1 PIN 2 PIN 3 S PIN 4 G

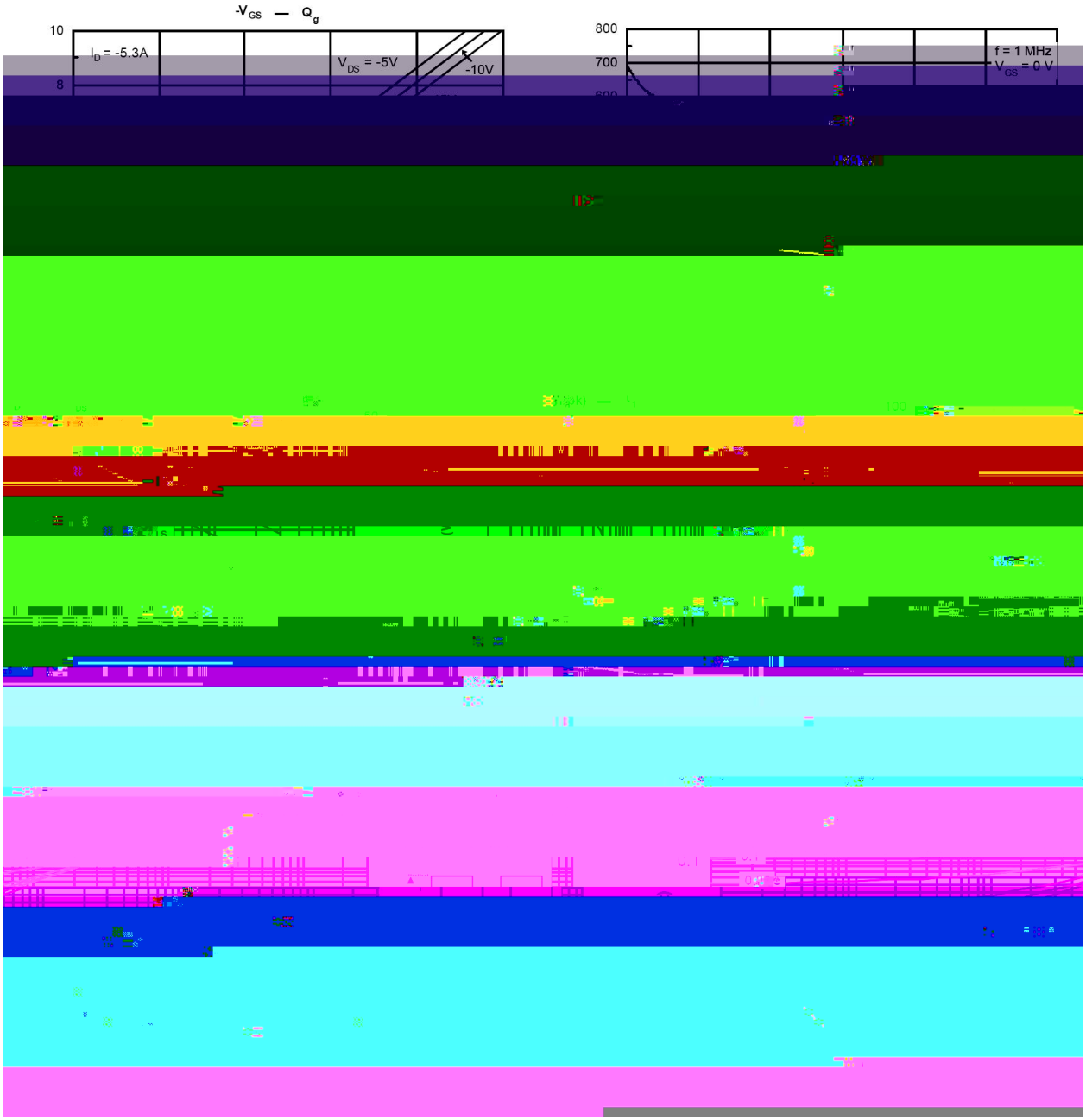
PIN5 PIN 6 PIN 7 PIN 8 D

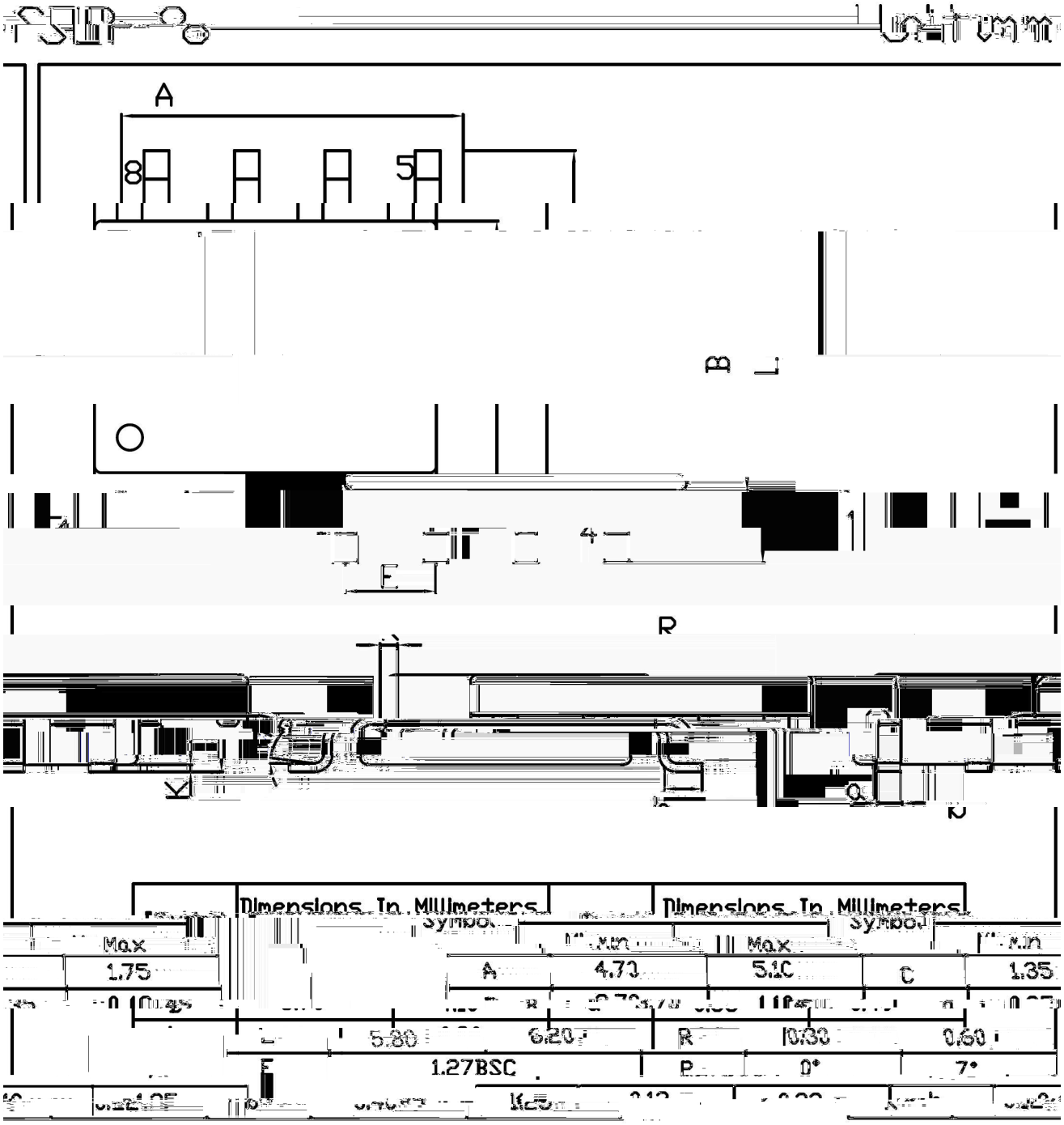
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	-30	V
Gate-Source Voltage	V_{GS}	±20	V
Drain Current –Continuous (note 1a)	I_D	-5.3	A
–Pulsed		-50	A
Power Dissipation for Single Operation (note 1a)	P_D	2.5	W
(note 1b)		1.2	
(note 1c)		1.0	
Thermal Resistance, Junction-to-Ambient (note 1a)	$R_{\theta JA}$	50	℃/ W
Thermal Resistance, Junction-to-Ambient (note 1c)	$R_{\theta JA}$	125	℃/ W
Thermal Resistance, Junction-to case (note 1)	$R_{\theta JC}$	25	℃/ W
Operating and Junction Temperature Range	T_j T_{stg}	-55~175	℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	V_{GS}=0V I_D=-250μA	-30			V
Breakdown Voltage Temperature Coefficient	$\Delta B_{VDSS}/\Delta T_J$	I_D=-250μA Referenced to 25℃		-23		mV/℃
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-24V V_{GS}=0V			-1.0	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	-1.0	-1.7	-3.0	V
Gate Threshold Voltage Temperature Coefficient	$\Delta V_{GS(th)}/\Delta T_J$	I_D=-250μA Referenced to 25℃		4.5		mV/℃
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=–10V I_D=–5.3A		42	50	mΩ
		V_{GS}=–4.5V I_D=–4A		65	80	
		V_{GS}=–10 V I_D=–5.3A T_J=125°C		57	77	
On-State Drain Current	$I_{D(on)}$	V_{GS}=–10V V_{DS}=–5V	-25			A
Forward Transconductance	g_{FS}	V_{DS}=–5V I_D=–5.3A		10		S

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Capacitance	C_{iss}	V_{DS}=–15V V_{GS}=0V f =1.0MHz		528		pF
Output Capacitance	C_{oss}			132		

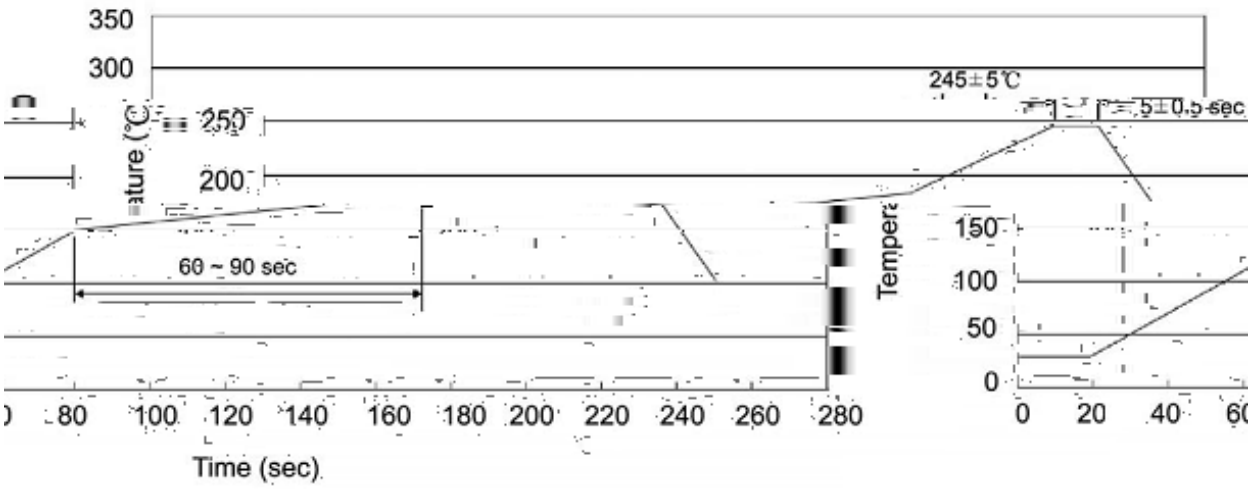

-I_D – -V_DS
30
V_GS=-10V
-6.0V
-5.0V
-4.5V
20
-4.0V
-I_D (A)
-3.5V
-3.0V
R_DS(ON) – -I_D
2
1.8
V_GS=-4.0V
1.6
-4.5V
1.4
-5.0V
-6.0V
1.2
-8.0V
-10V
1
R_DS(ON) NORMALIZED


-VGS — Qg
10
8
ID = -5.3A
VDS = -5V
-10V
800
700
f = 1 MHz
VGS = 0 V


A
B
Dimensions In Millimeters
Dimensions In Millimeters
Max
1.75
4.71
5.10
1.35
5.80
6.20
0.30
0.60
1.27BSC
0°
7°

BR

Temperature Profile for IR Reflow Soldering(Pb-Free)



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.

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

/ REEL

Package Type	Units					Dimension		(unit mm^3)
	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