

5 é / Descriptions

SOT-23 .> / / x 6 3 MOS « | • ' ož
P- CHANNEL MOSFET in a SOT-23 Plastic Package.

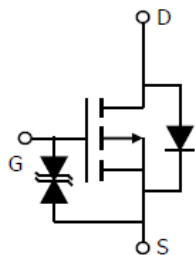
□ ª / Features

$V_{DS}=-20V$ $I_D=-4.0A$
 $R_{DS(on)}@-4.5V$ 0 42m , (Typ. 32m)
 $R_{DS(on)}@-2.5V$ 0 55m , (Typ. 43m)
ESD Protected
—)í D }ož HF Product.

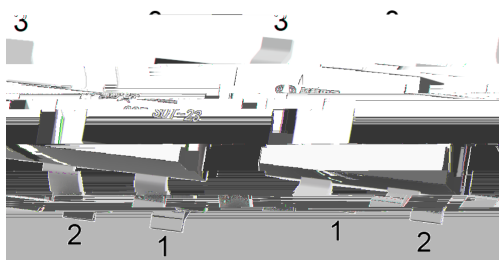
Đ ÷ / Applications

č ú • ¼ k P ' ož
Load switch k Battery protection.

Ã W] Ô · / Equivalent Circuit



• Ů - æ / Pinning



PIN1 y G PIN 2 y S PIN 3 y D

, M V / Marking

Marking	.3415E
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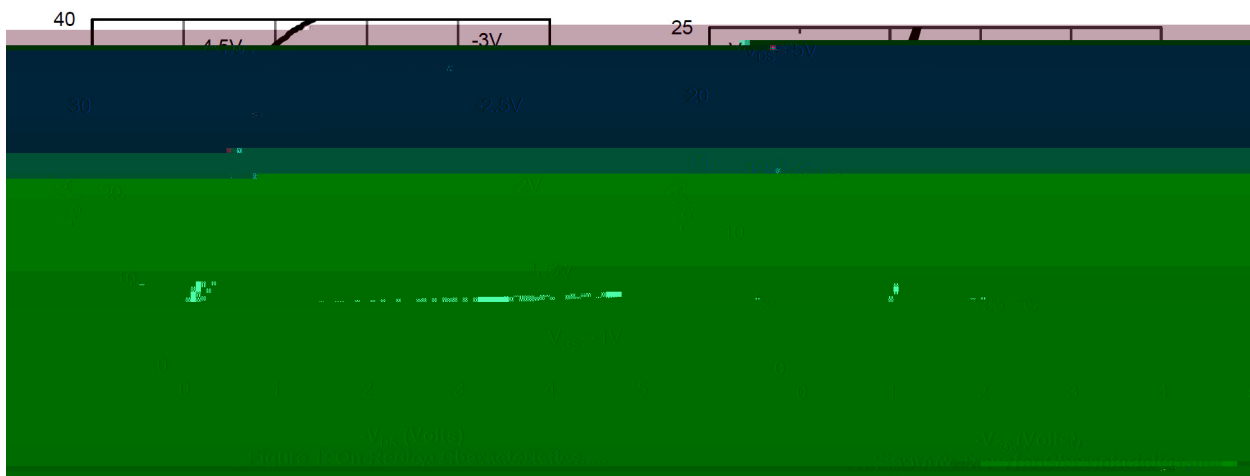
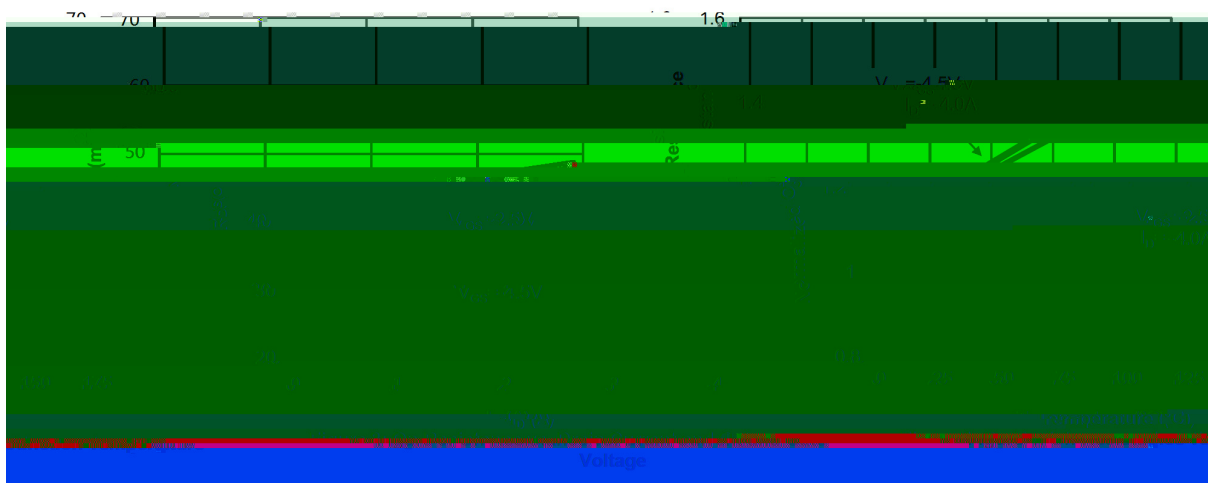
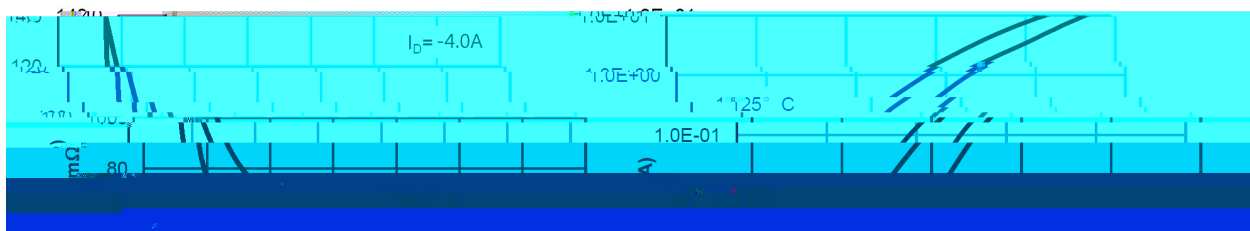
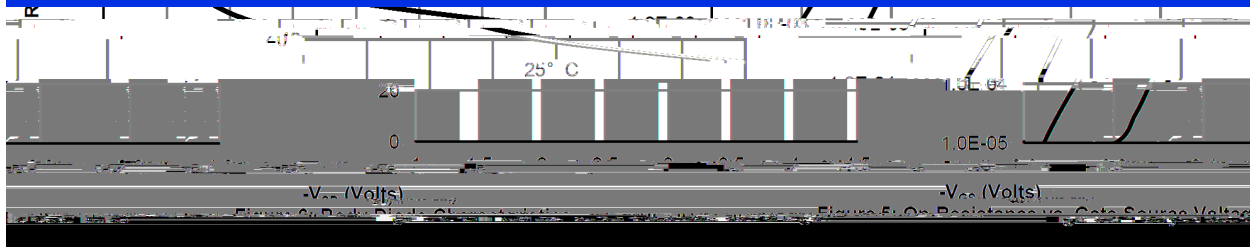

 Absolute Maximum Ratings($T_A=25^\circ\text{C}$;)

@ f Parameter	... Z Symbol	f > Rating	% y Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	f 10	V
Drain Current-Continuous	I_D	-4.0	A
Drain Current-Continuous($T_A=70^\circ\text{C}$)	I_D	-3.5	A
Drain Current-Pulsed	I_{DM}	-20	A
Maximum Power Dissipation	P_D	1.2	W
Maximum Power Dissipation($T_A=70^\circ\text{C}$)	P_D	0.9	W
Operating Junction Temperature Range and Storage Temperature Range	T_J, T_{STG}	-55 to +150	
Thermal Resistance, Junction-to-Ambient	R_{JA}	105	/W

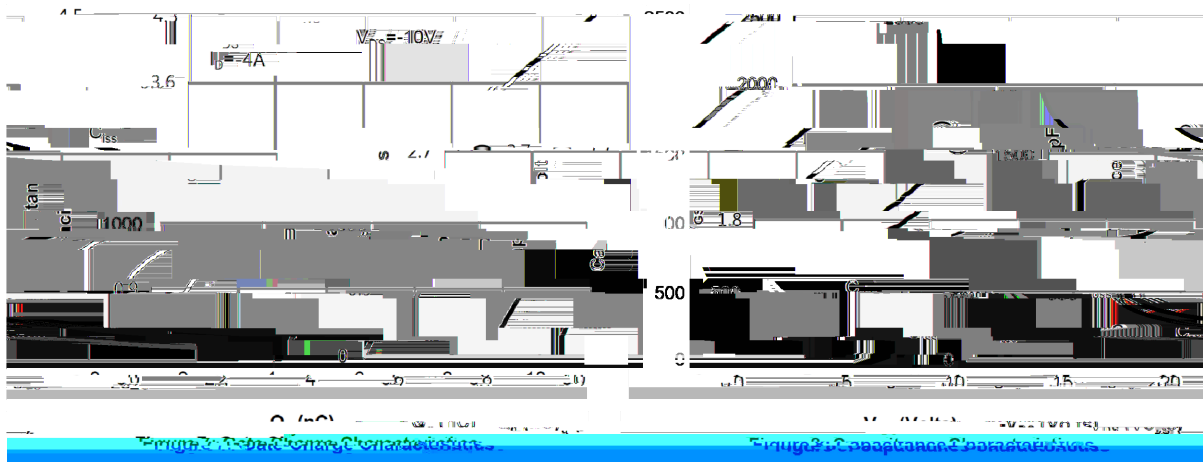
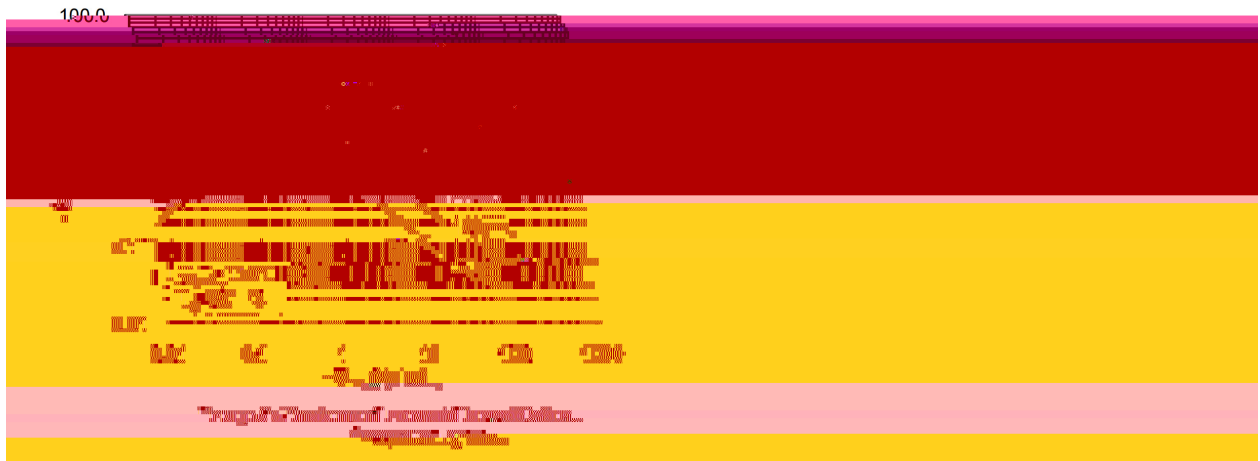
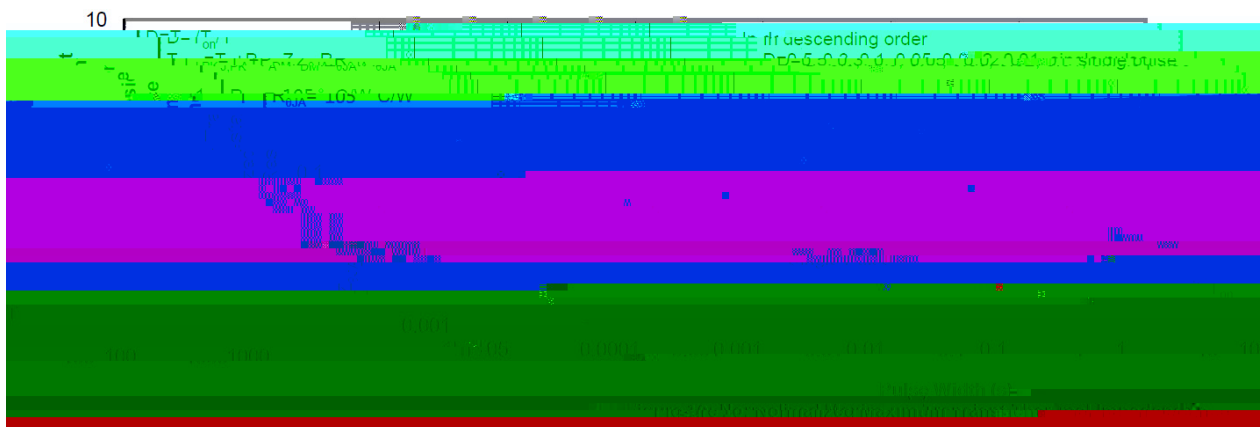
 Electrical Characteristics($T_A=25^\circ\text{C}$;)

@ f Parameter	... Z Symbol	y i Ú ^ Test Conditions	Â 4 > Min	Á ° > Typ	Â Ý > Max	% y Unit
Drain-Source Breakdown Voltage	$B_{V_{DSS}}$	$V_{GS}=0V \quad I_D=-250 \text{ A}$	-20			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-20V \quad V_{GS}=0V$			-1	μA
Gate-Body Leakage	I_{GSS}	$V_{GS}=\pm 10V \quad V_{DS}=0V$			f 25	μA
Gate Threshold Voltage	V_{TH}	$V_{DS}=V_{GS} \quad I_D=-250 \text{ A}$	-0.45		-0.9	V
Drain-Source On-State Resistance	$R_{DS(ON)}$	$V_{GS}=-4.5V \quad I_D=-4.0A$		32	42	m
		$V_{GS}=-2.5V \quad I_D=-4.0A$		43	55	
Input Capacitance	C_{iss}	$V_{DS}=-10V \quad V_{GS}=0V$ $f=1\text{MHz}$		1420		pF
Output Capacitance	C_{oss}			210		
Reverse Transfer Capacitance	C_{rss}			190		
Turn-On Delay Time	$t_{d(on)}$	$V_{DS}=-10V \quad V_{GS}=-4.5V$ $R_{GEN}=3 \quad R_L=2.5$		9.5		ns
Rise Time	t_r			17		
Turn-Off Delay Time	$t_{d(off)}$			94		
Fall Time	t_f			35		
Total Gate Charge	Q_g	$V_{DS}=-10V \quad I_{DS}=-4A$ $V_{GS}=-4.5V$		17.2		nC
Gate-Source Charge	Q_{gs}			1.3		
Gate-Drain Charge	Q_{gd}			4.5		
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V \quad I_{DS}=-2.2A$			-1.0	V
Reverse Recovery Time	t_{rr}	$I_F=-4A, dI/dt=100A/s$		31		ns
Reverse Recovery Charge	Q_{rr}	$I_F=-4A, dI/dt=100A/s$		13.8		nC

Ω ? d • Ž ¢ / Electrical Characteristic Curve



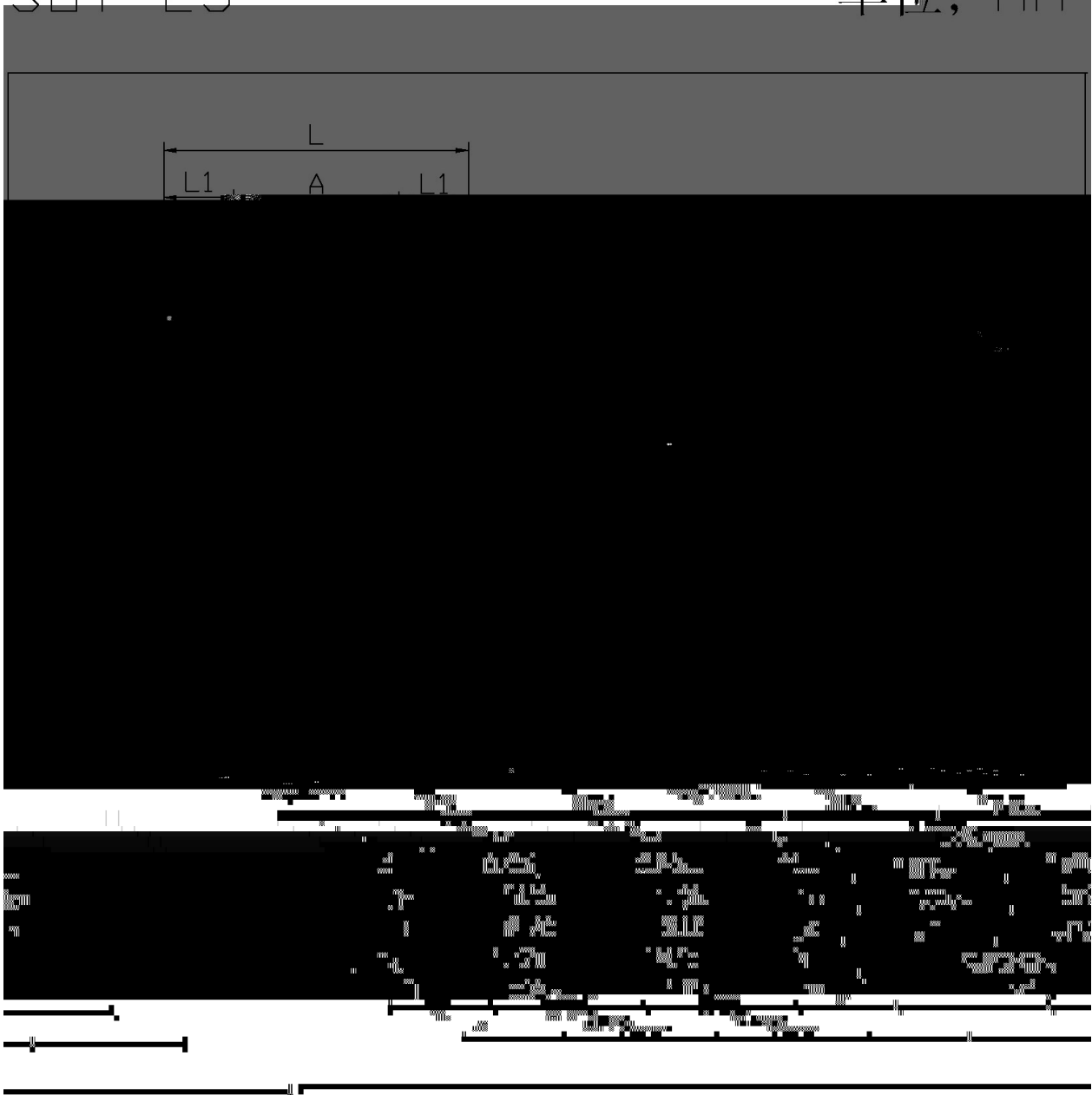
Electrical Characteristic Curve



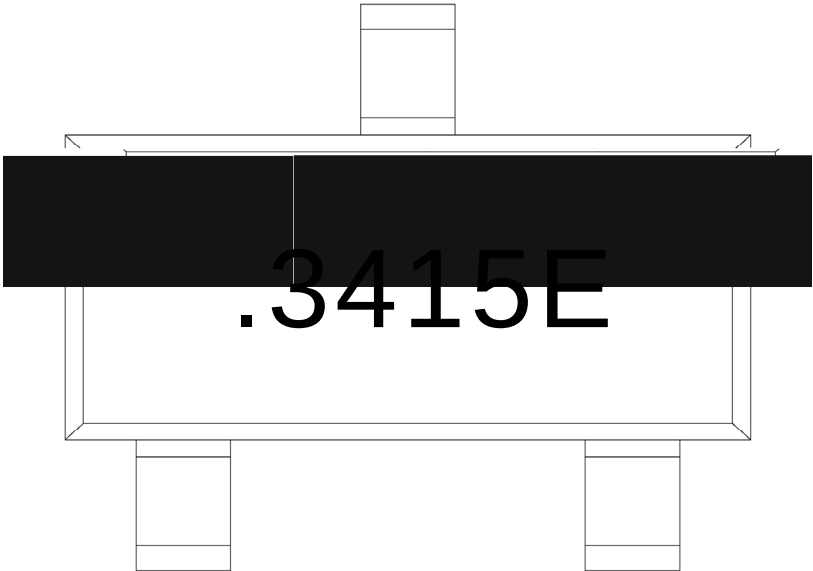
Ø □ =) ⌀ / Package Dimensions

SOT-23

单位: mm



, M y f / Marking Instructions



^a ¢ y
.3415E y ° Z W A

Note:
.3415E: Product Type Code

ŠWD t...•Žč (x/) / :KSVKXGZ[XK 6XULORK LUX /8 8KLRU] 9URJKXOTM 6

a ç y

1o• Ä ½ “† 150 ½180 - k ž • 60 ½90sec;

2o• Q > “† 245 r5 - k ž • 4 Ò 5 r0.5sec;

3o•D N ò i Ò 0 ,† 2 ½10 - /sec.

Note:

1.Preheating:150~180 - , Time:60~90sec.

2.Peak Temp.:245 r5 - , Duration:5 r0.5sec.

3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ¯ »] / Resistance to Soldering Heat Test Conditions

“† y 260 r5 -

ž • y 10 r1 sec.

Temp.:260±5

Time:10±1 sec

G P á / Packaging SPEC.

2 & x / REEL

Package Type 7>û ~ E	Units ;>û H					Dimension ;>û p . (unit /mm³)		
	Units/Reel /-	Reels/Inner Box -- /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Reel	Inner Box	Outer Boxç
SOT-23	3,000	10	30,000	6	180,000	7 T×8	180×120×180	390×385×205

„Đ y f / Notices

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