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

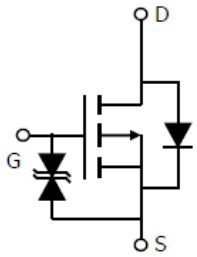
—)í D }ož HF Product.

Đ ÷ / Applications

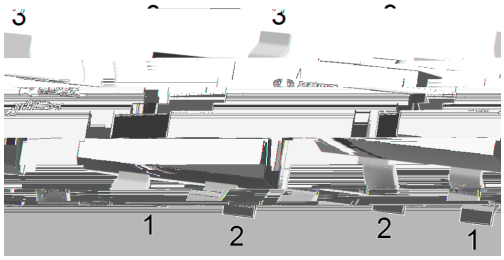
¿ ú • ¼ k P ‘ ož

Load switch k Battery protection.

Ã W] Ô · / Equivalent Circuit



• Û - æ / Pinning



PIN1 y G PIN 2 y S PIN 3 y D

, M V / Marking

Marking	.3415E

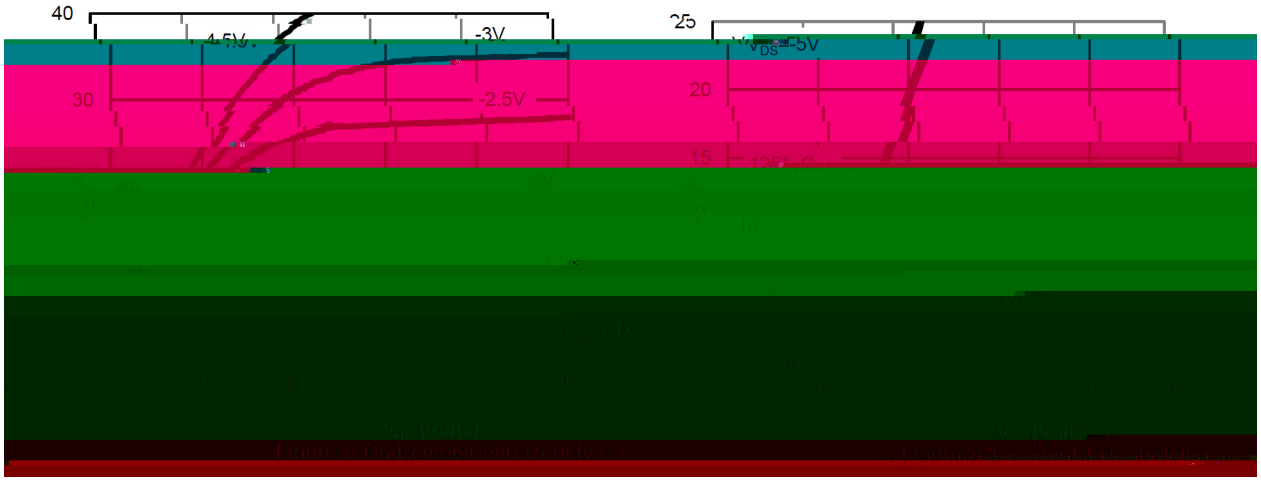
Ã a ? d / Absolute Maximum Ratings(Ta=25 ;)

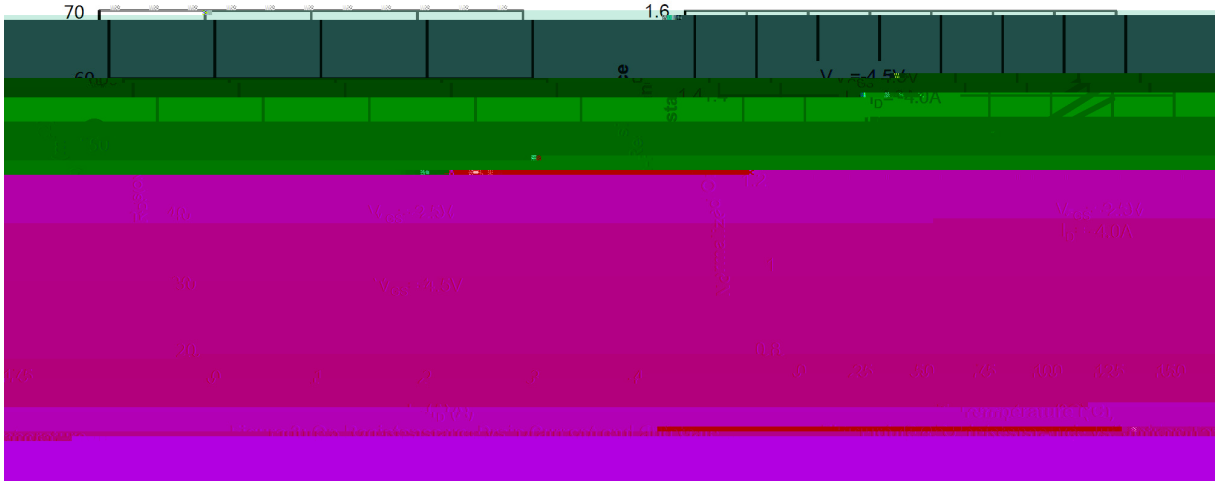
@ ƒ Parameter	… Z Symbol	ƒ › Rating	% y Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	f 10	V
Drain Current-Continuous	I_D	-4.0	A
Drain Current-Continuous(T_A =70°C)	I_D	-3.5	A
Drain Current-Pulsed	I_{DM}	-20	A
Maximum Power Dissipation	P_D	1.2	W
Maximum Power Dissipation(T_A =70°C)	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

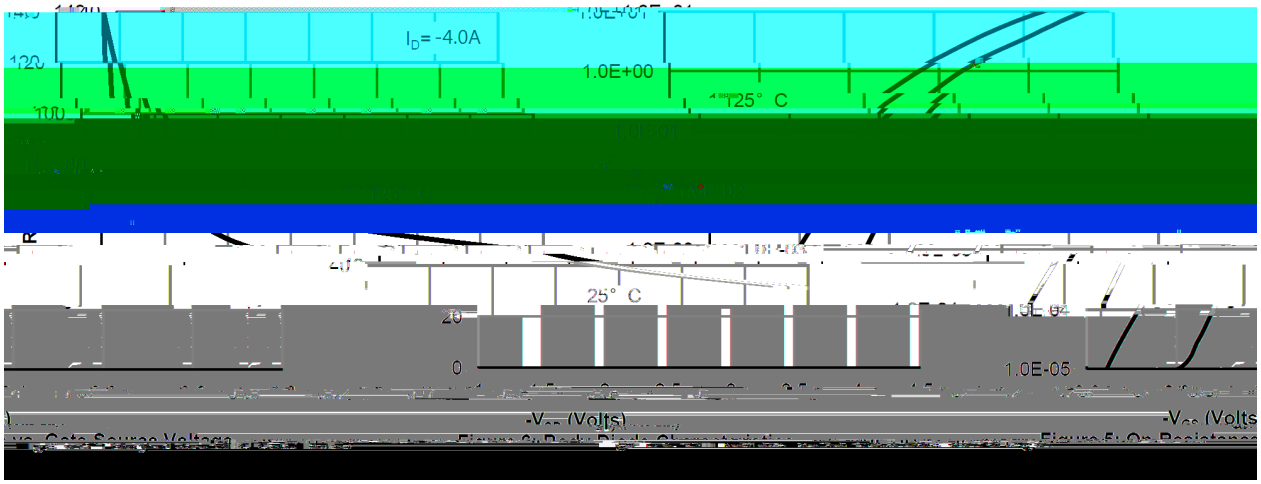
Ô4ì × ? d / Electrical Characteristics(Ta=25 ;)

@ ƒ Parameter	… Z Symbol	y ¡ Ú ^ Test Conditions	Â 4 › Min	Á º › Typ	Â Ý › Max	% y Unit
Drain-Source Breakdown Voltage	B_{VDSS}	V_{GS}=0V I_D =-250 A	-20			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-20V V_{GS}=0V			-1	uA
Gate-Body Leakage	I_{GSS}	V_{GS}=±10V V_{DS}=0V			f 25	uA
Gate Threshold Voltage	V_{TH}	V_{DS}=V_{GS} I_D=-250 A	-0.45		-0.9	V
Drain-Source On-State Resistance	$R_{DS(ON)}$	V_{GS}=-4.5V I_D=-4.0A		32	42	m
		V_{GS}=-2.5V I_D=-4.0A		43	55	
Input Capacitance	C_{iss}	V_{DS}=-10V V_{GS}=0V f=1MHz		1420		pF
Output Capacitance	C_{oss}			210		
Reverse Transfer Capacitance	C_{rss}			190		
Turn-On Delay Time	$t_{d(on)}$	V_{DS}=-10V V_{GS}=-4.5V R_{GEN}=3 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 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 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

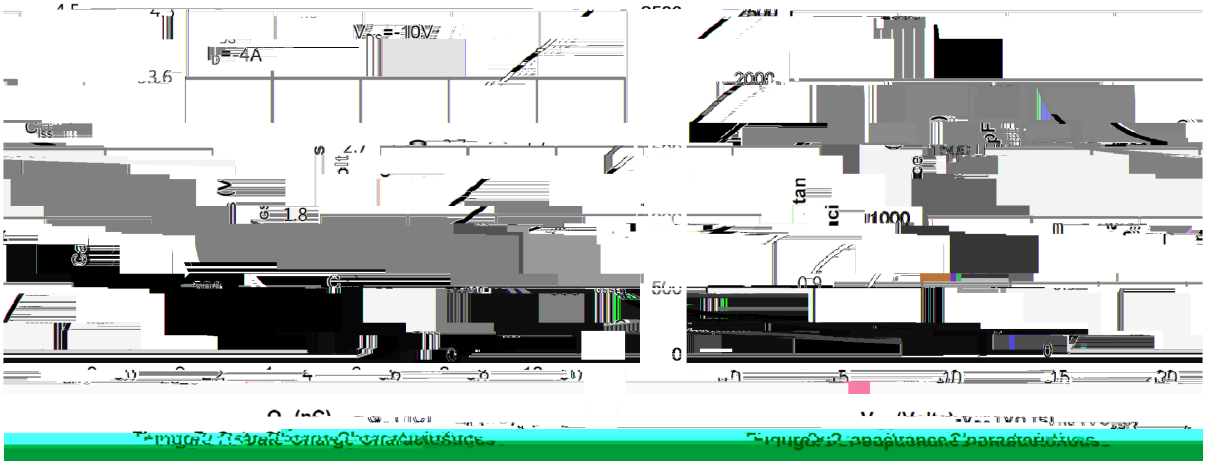
Ô ? d • Ž ¢ / Electrical Characteristic Curve

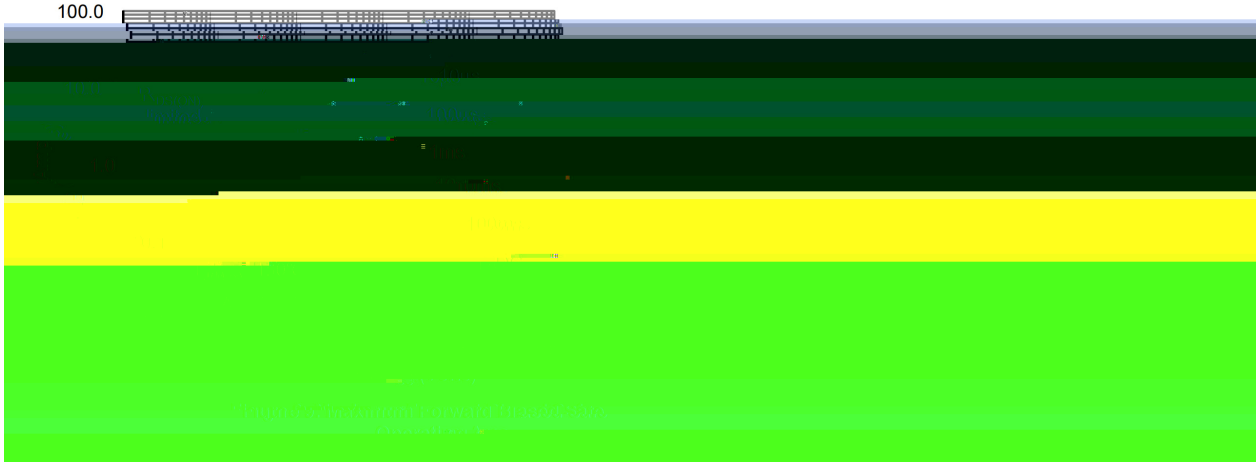


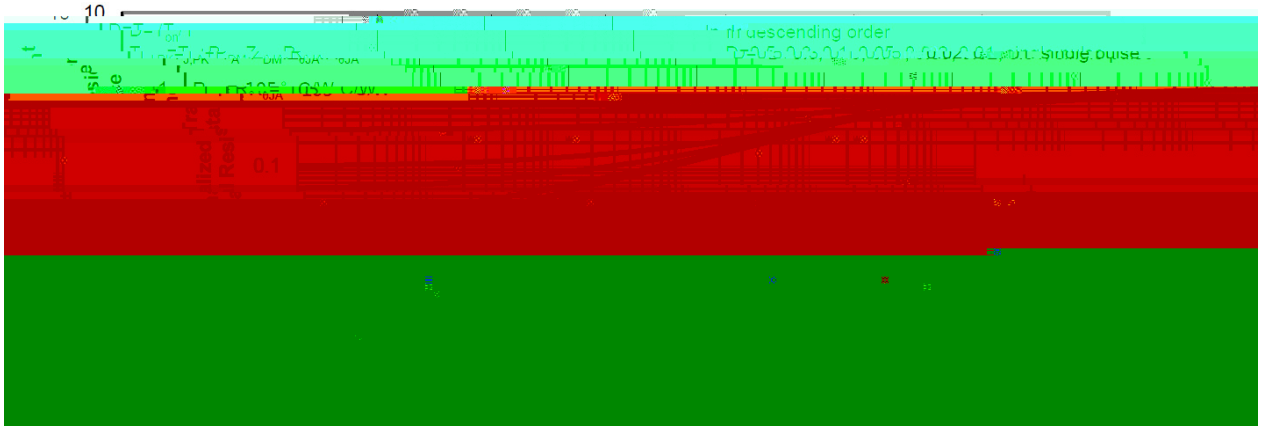




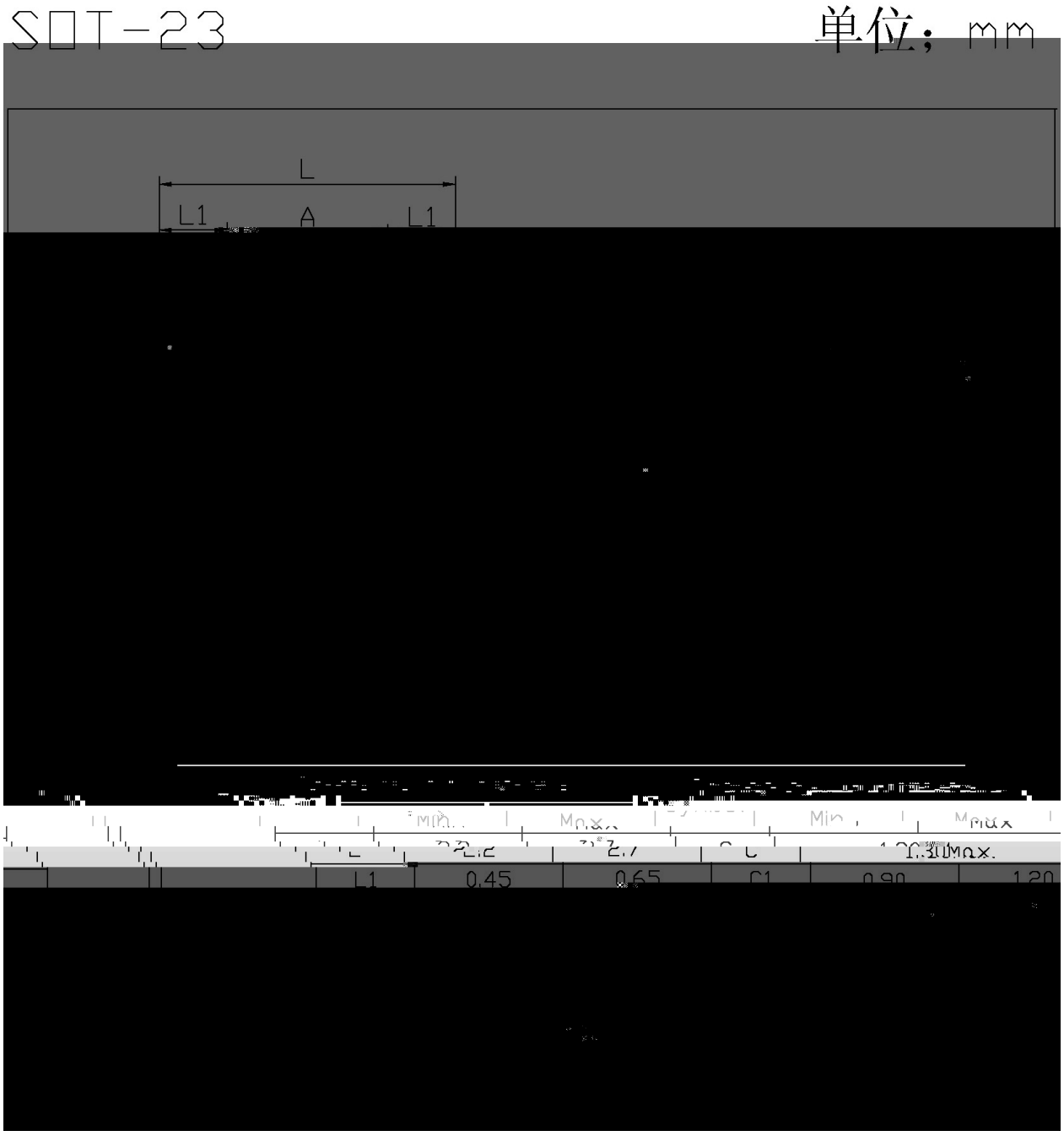
Ô ? d • Ž ¢ / Electrical Characteristic Curve



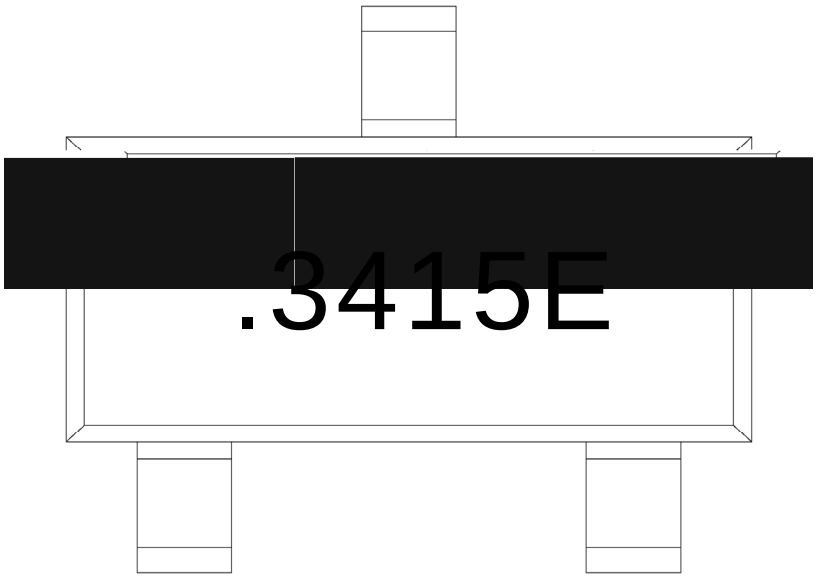




Ø ¤ =) ¢ / Package Dimensions



, M y ƒ / Marking Instructions



ª ¢ y

.3415E y º Z W A

Note:

.3415E: Product Type Code

š WD t … • Ž ¢ (x /) / : K S V K X G Z [X K 6 X U L O R K L U X / 8 8 K L R U] 9 U R J K X O T M 6

ª ¢ 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 Æmm³)		
	Units/Reel / --	Reels/Inner Box -- /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Reel	Inner Box×	Outer Box1ç
SOT-23	3,000	10	30,000	6	180,000	7 T×8	180×120×180	390×385×205

„ Ð y ƒ / Notices

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