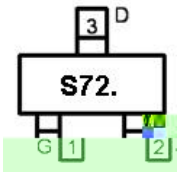
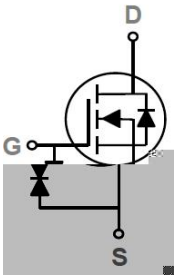
V_{DSS}	60V
R_{DS}(on)	2 (p.)
I_D	0.27A





- Ad anced rench MOSFET process echnolog
- Special designed for PWM, load s i ching and general p rpose applica ions
- Ul ra lo on-resis ance i h lo ga e charge
- High Po er and c rren handing capabili
- F ll A alanche Ra ed
- ESD Pro ec ion HBM 2KV

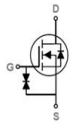
I ili es he ad anced rench processing echniq es o achie e e remel lo on resis ance and lo ga e charge. These fea res combine o make his design an e remel efficien and reliable de ice for se in PWM, load s i ching and a ide arie of o her applica ions.

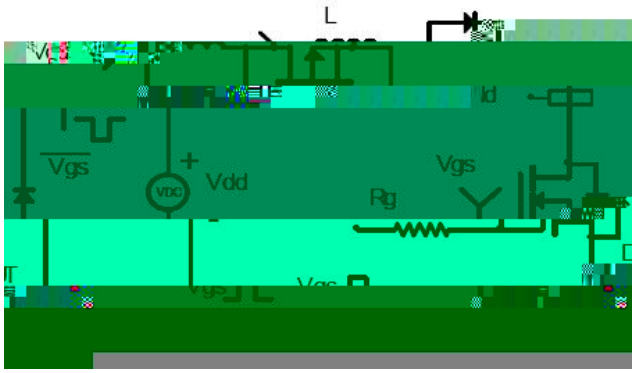
I_D @ T_C = 25 C	Con in o s Drain C rren , V_{GS} @ 10V	0.27	A
I_D @ T_C = 70 C	Con in o s Drain C rren , V_{GS} @ 10V	0.22	
I_{DM}	P lsed Drain C rren	1.1	
P_D @T_C = 25 C	Po er Dissipa ion	0.4	W
V_{DS}	Drain-So rce Vol age	60	V
V_{GS}	Ga e- o-So rce Vol age	20	V
T_J	Opera ing J nc ion	-55 o + 150	C
T_{STG}	S orage Tempera re Range	-55 o + 150	C

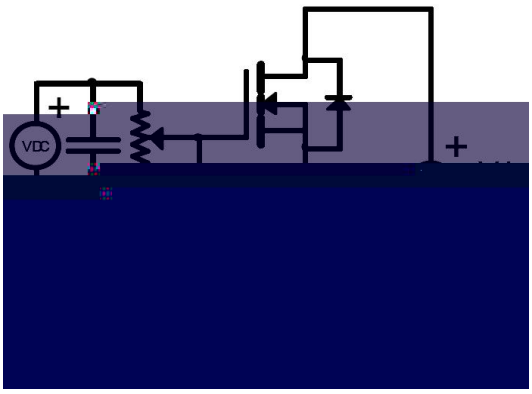
$R_{\theta JA}$	J nc ion- o-ambien (10s)		350	C /W

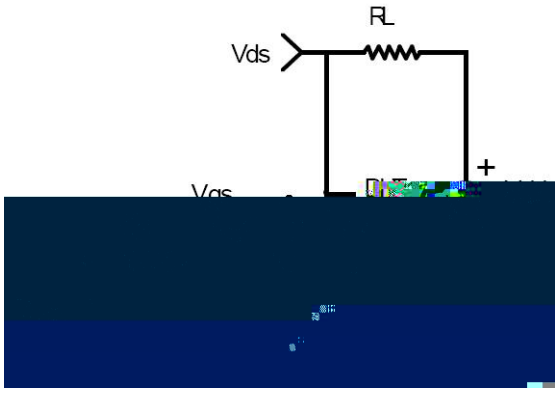
@T_A=25 C nless o her ise specified

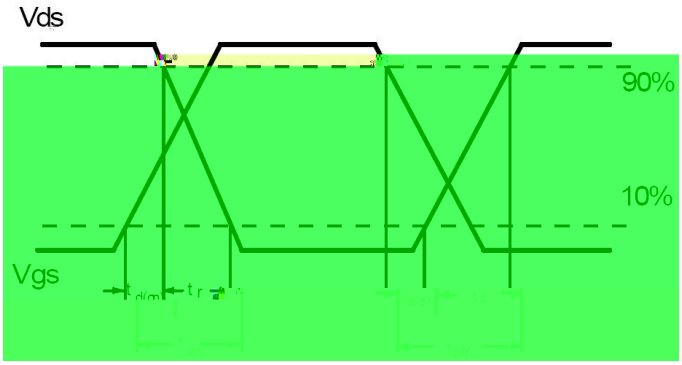
BV_{DSS}	Drain- o-So rce breakdo n ol age	60			V	V_{GS} = 0V, I_D = 250 A
$R_{DS(on)}$	S a ic Drain- o-So rce on-resis ance		2	3		V_{GS}=10V,I_D =500mA
			2.3	4		V_{GS}=4.5V,I_D = 200mA
			3.5	4.5		V_{GS}=3V,I_D =10mA
$V_{GS(th)}$	Ga e hreshold ol age	1		2.5	V	V_{DS} = V_{GS}, I_D = 250 A
I_{DSS}	Drain- o-So rce leakage c rren			1	A	V_{DS} =60V,V_{GS} = 0V
I_{GSS}	Ga e- o-So rce for ard leakage			10	A	V_{GS} =20V
	Ga e- o-So rce re erse leakage			-10		V_{GS} = -20V
Q_g	To al ga e charge		1.2		nC	I_D = 200mA,
Q_{gs}	Ga e- o-So rce charge		1.8			V_{DS}=30V,
Q_{gd}	Ga e- o-Drain("Miller") charge		0.2			V_{GS} = 4.5V
$t_{d(on)}$	T rn-on dela ime		3.5		ns	V_{GS}=10V, V_{DS}=30V, R_{GEN}=10 , I_D =200mA
t_r	Rise ime		21.5			
$t_{d(off)}$	T rn-Off dela ime		5.8			
t_f	Fall ime		21.2			
Ciss	Inp capaci ance		19.1		pF	V_{DS}=25V,
Coss	O p capaci ance		12.8			V_{GS}=0V,
Crss	Re erse ransfer capaci ance		6			f=1MHZ

I_S	Ma im m Bod -Diode Con in o s C rren		0.27		A	MOSFET s mbol sho ing he in egral re erse p-n j nc ion diode. 
I_{SM}	Ma im m Bod -Diode P lse C rren		1.1		A	
V_{SD}	Diode For ard Vol age		0.86	1.3	V	T_J=25 C,I_S=200mA,V_{GS}=0 V

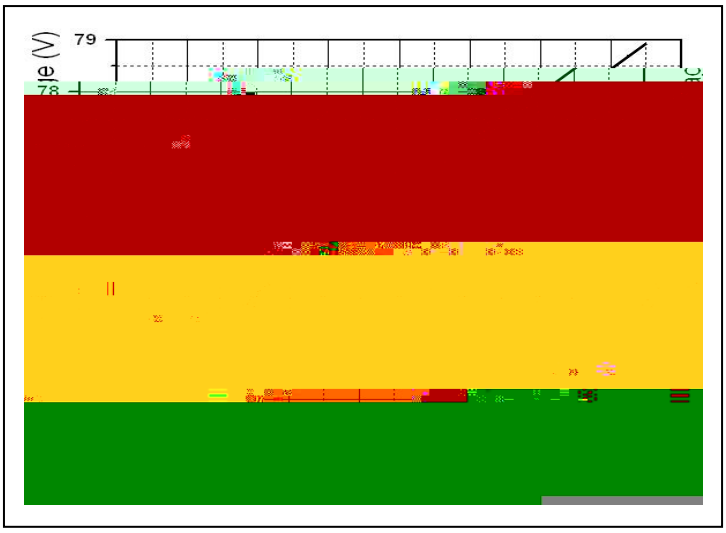


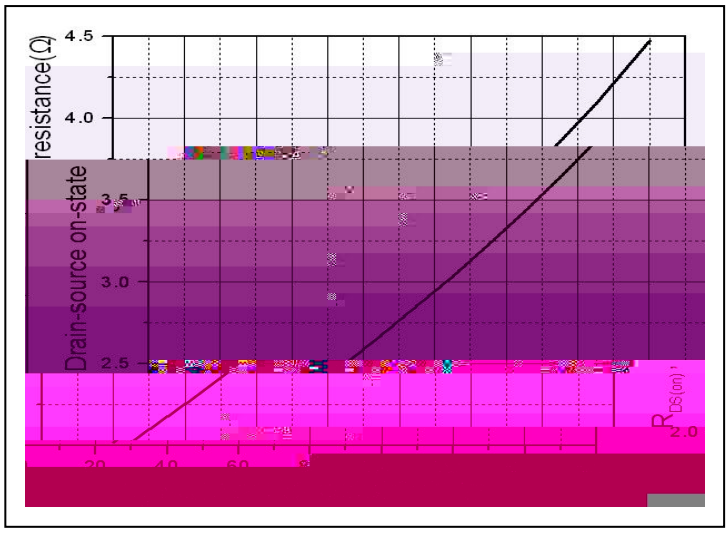


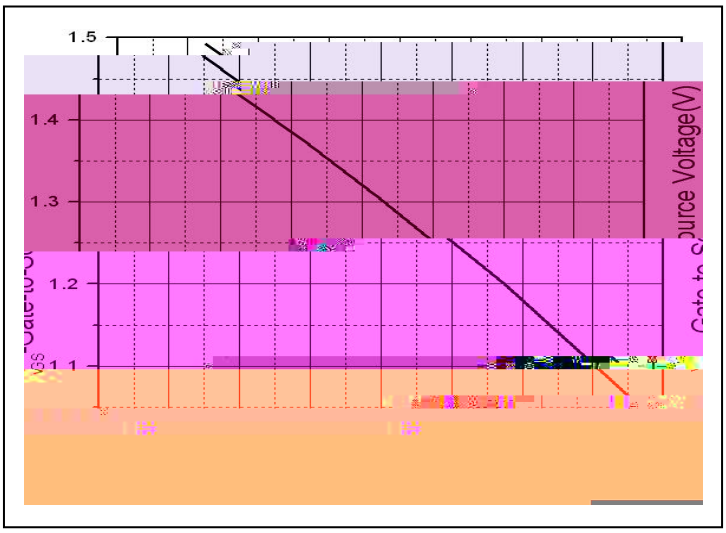


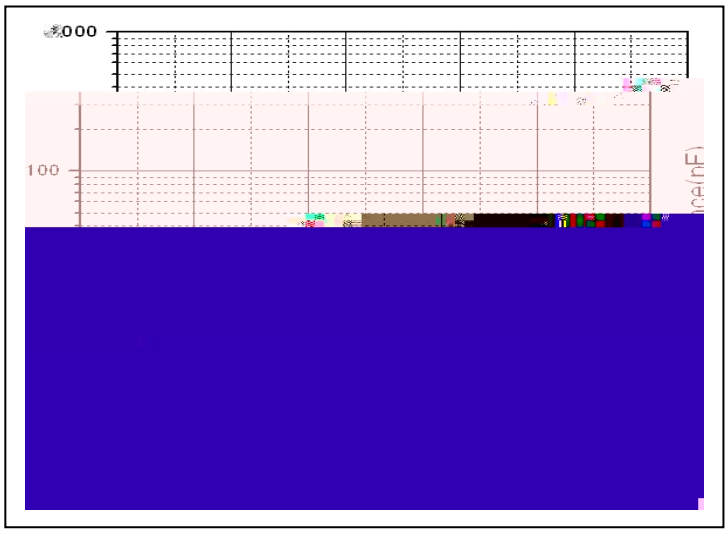


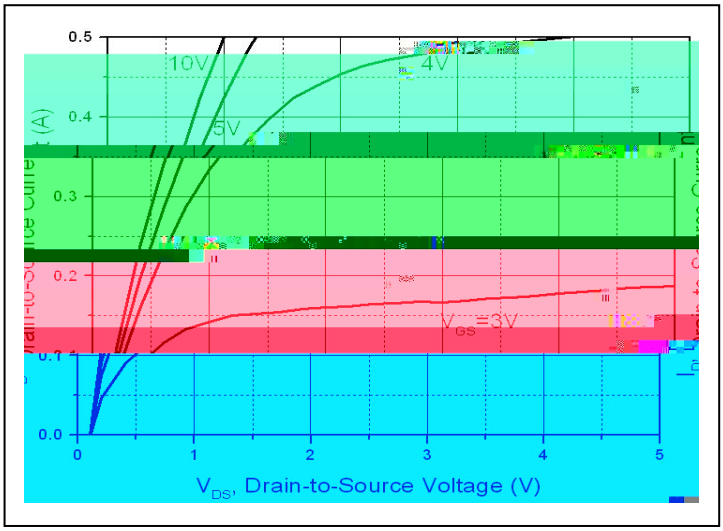
Calc la ed con in o s c rren based on ma im m allo able j nc ion empera re.
Repe i i e ra ing; p lse id h limi ed b ma . j nc ion empera re.
The po er dissipa ion P_D is based on ma . j nc ion empera re, sing j nc ion- o-case hermal resis ance.
The al e of R_{JA} is meas red i h he de ice mo n ed on 1 in 2 FR-4 board i h 2o . Copper, in a s ill air en ironmen i h T_A =25 C


79
78

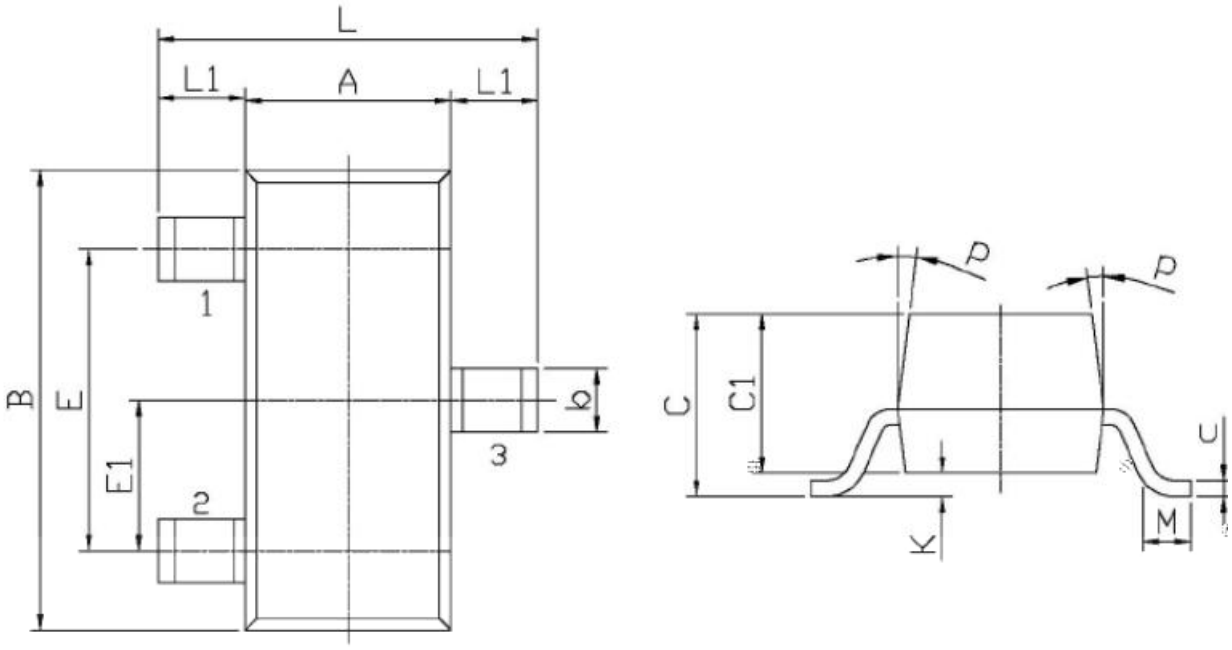

4.5
4.0
3.5
3.0
2.5
2.0
Drain-source on-state


1.5
1.4
1.3
1.2
1.1


000
100


0.5
0.4
0.3
0.2
0.1
0.0
10V
4V
5V
V_{GS}=3V
0
1
2
3
4
5
V_{DS}, Drain-to-Source Voltage (V)

mm



Symbol	Dimensions In Millmeters		Symbol	Dimensions In Millmeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.10	K	0	0.10
E	1.70	2.10	M	0.20MIN	
E1	0.85	1.05	P	7°	
b	0.35	0.55			

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Silikron ass mes no responsibili for eq ipmen fail res ha res l from sing prod c s a al es ha e ceed, e en momen aril , ra ed al es (s ch as ma im m ra ings, opera ing condi ion ranges, or o her parame ers) lis ed in prod c s specifica ions of an and all Silikron prod c s described or con ained herein.

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