

Main Product Characteristics:

Features and Benefits:

TO -247-4L

Schematic Diagram

Absolute Max Rating:

Symbol	Parameter	Value	Units

Thermal Resistance

Symbol	Characterizes	Typ.	Max.	Units

Electrical Characteristics

Typical Electrical and Thermal Characteristics

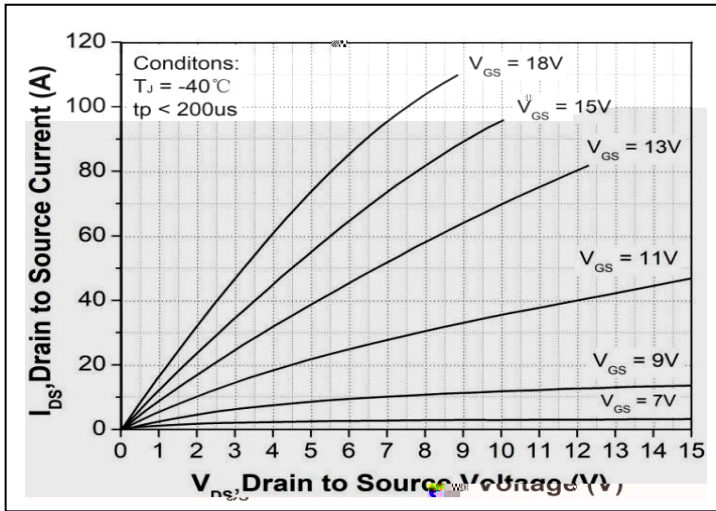


Figure1. Typical Output Characteristics@ $T_j = -40$

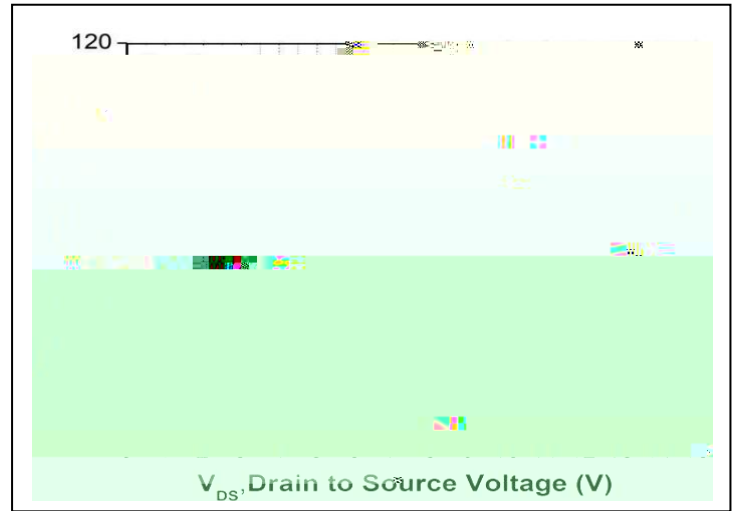


Figure2. Typical Output Characteristics@ $T_j = 25$

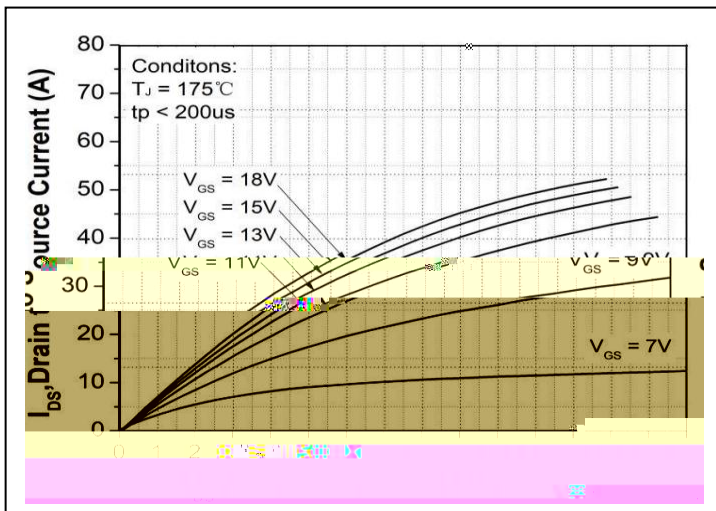


Figure3. Typical Output Characteristics@ $T_j = 175$

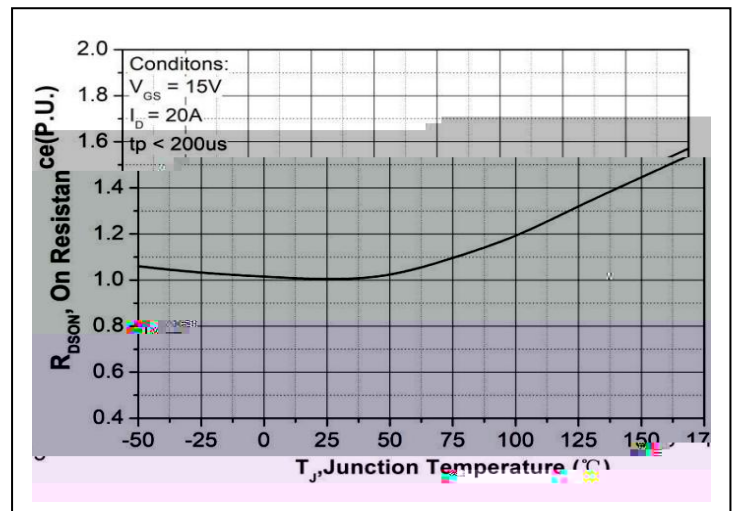


Figure4. Normalized on-resistance vs. Temperature

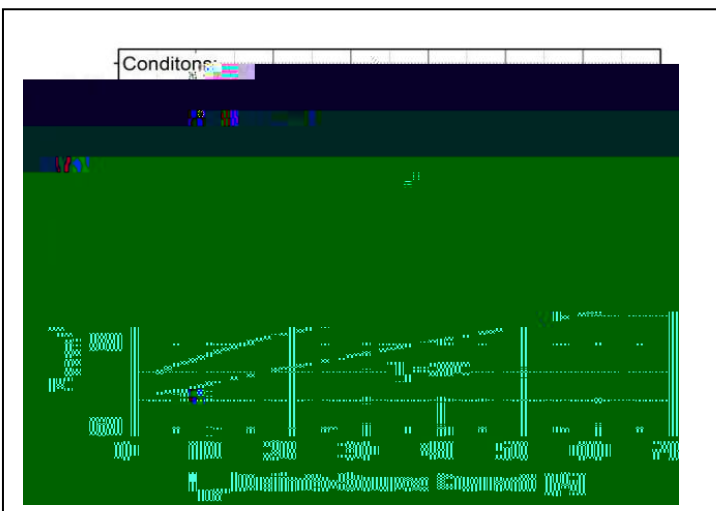


Figure5. On-resistance vs. Drain Current

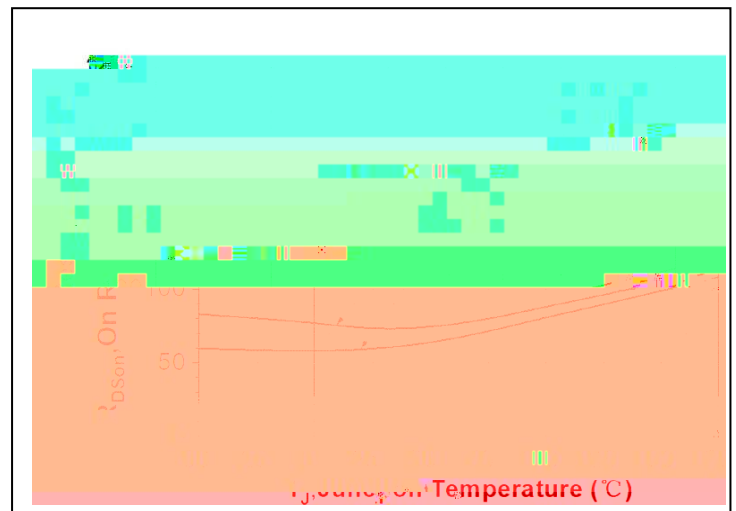


Figure6. On-resistance vs. Temperature various gate

Typical Electrical and Thermal Characteristics

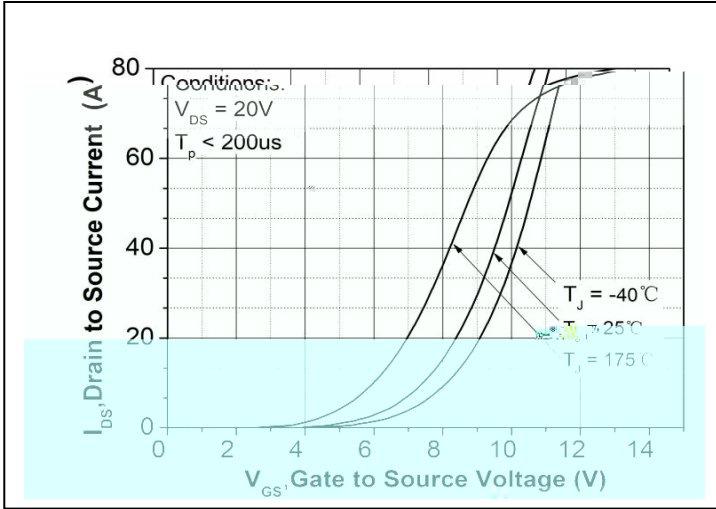


Figure7.Transfer Characteristic for Various Junction Temperatures

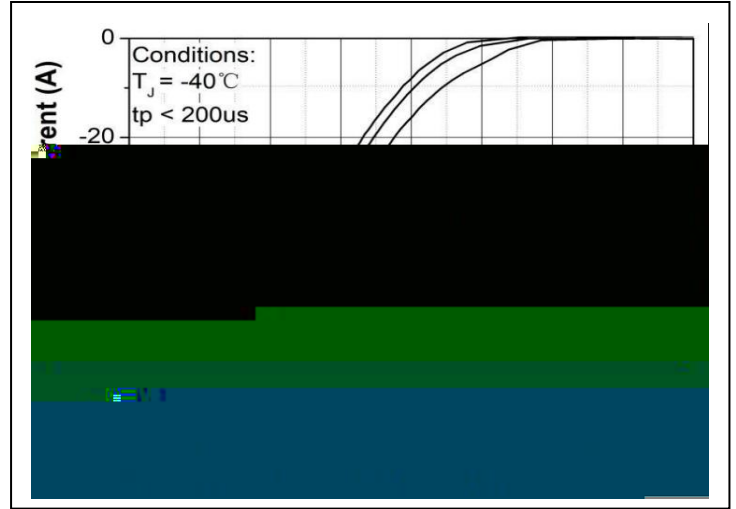


Figure8.Body Diode Characteristic @T_J = -40 °C

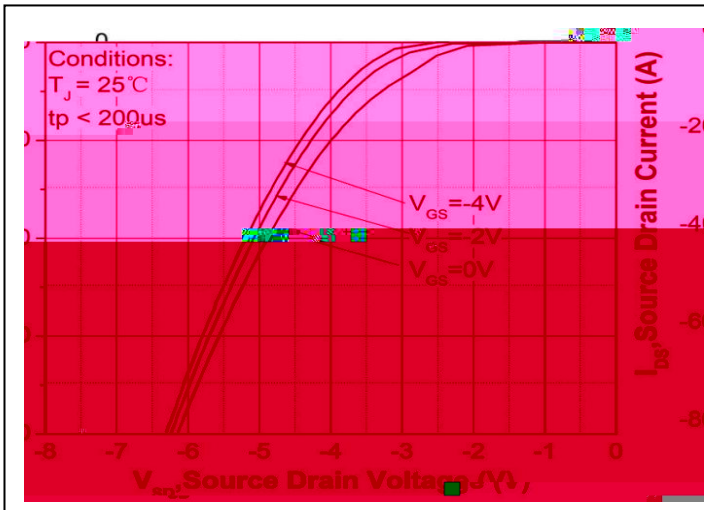


Figure9.Body Diode Characteristic @T_J = 25 °C

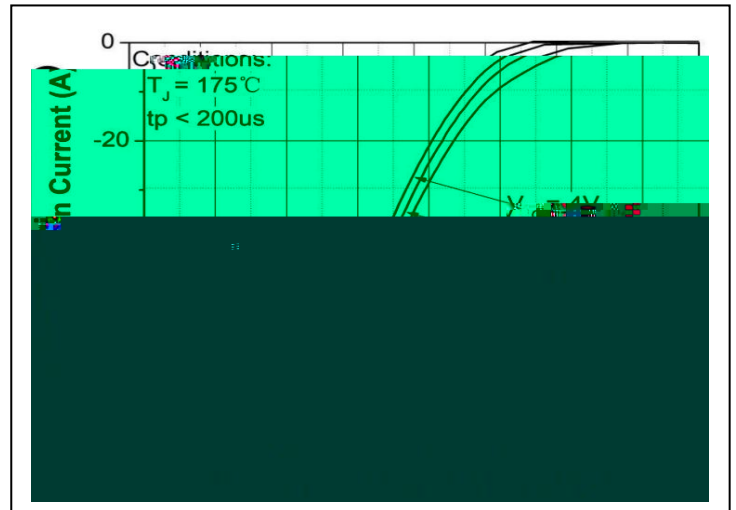


Figure10.Body Diode Characteristic @T_J = 175 °C

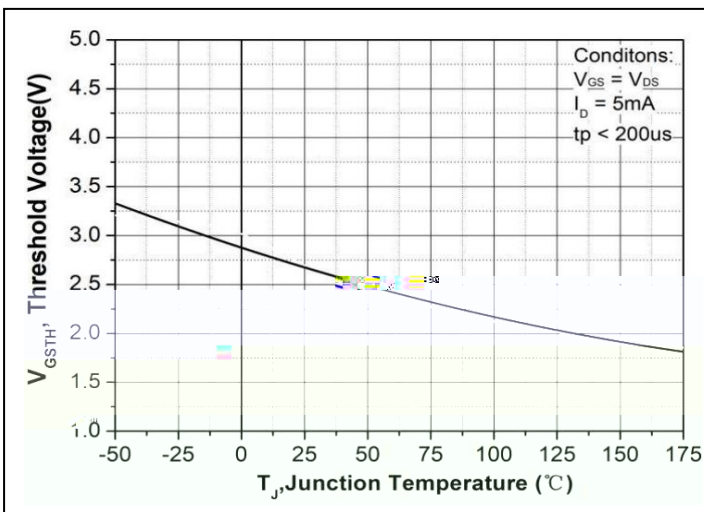


Figure11.Threshold Voltage vs. Temperature

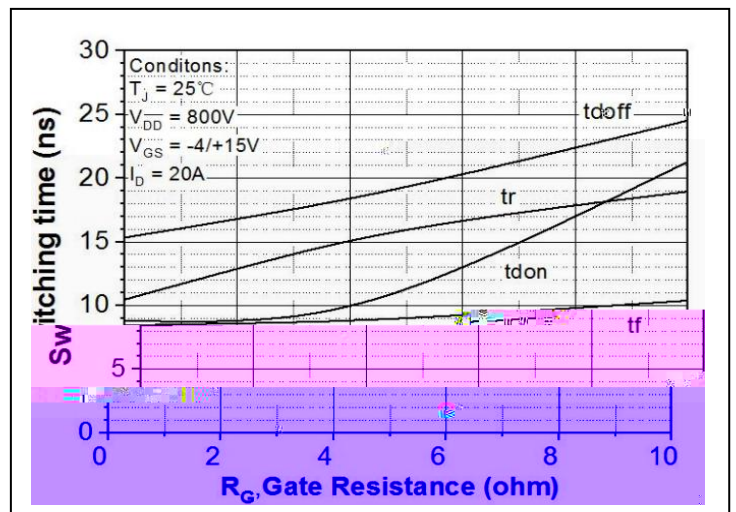


Figure12.Switching times vs. R_G(ext)

SPS S S

SMI120N75E22

Typical Electrical and Thermal Characteristics

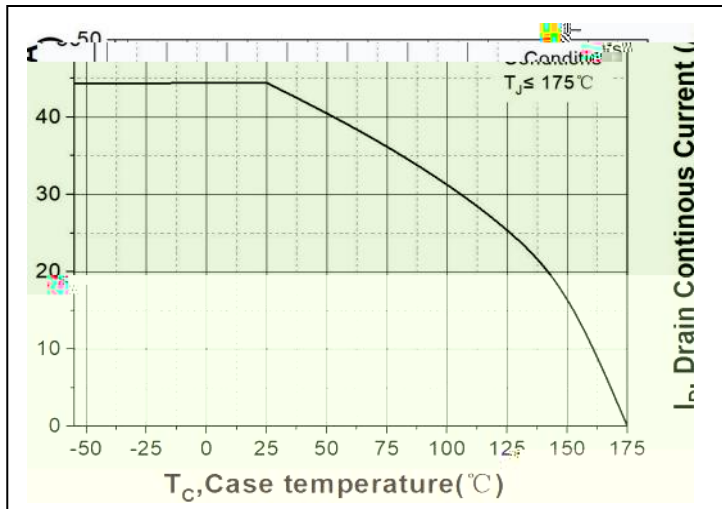


Figure19.Continuous Drain Current Derating vs.Case Temperature

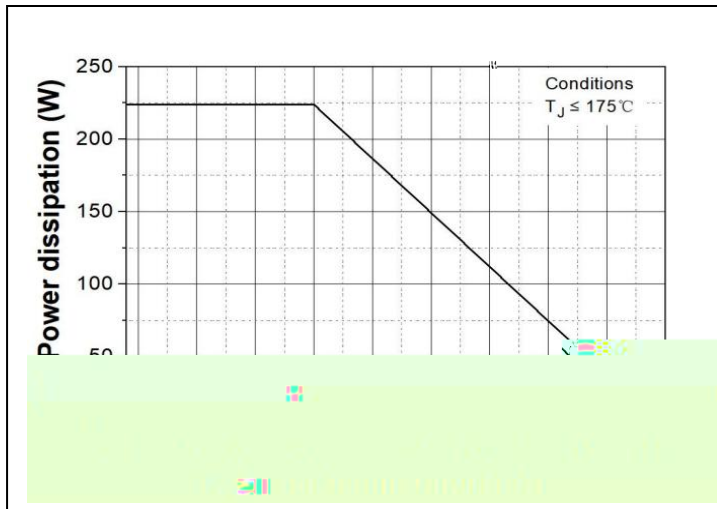


Figure20.Maximum Power Dissipation Derating vs. Case Temperature

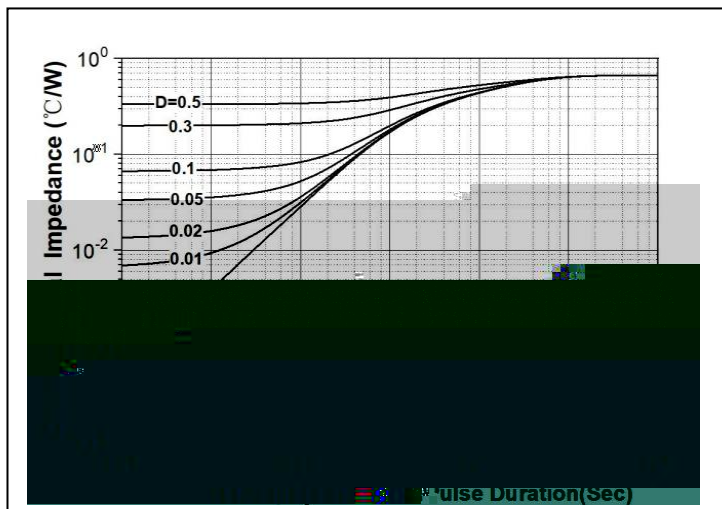


Figure21.Transient Thermal Impedance (Junction - Case)

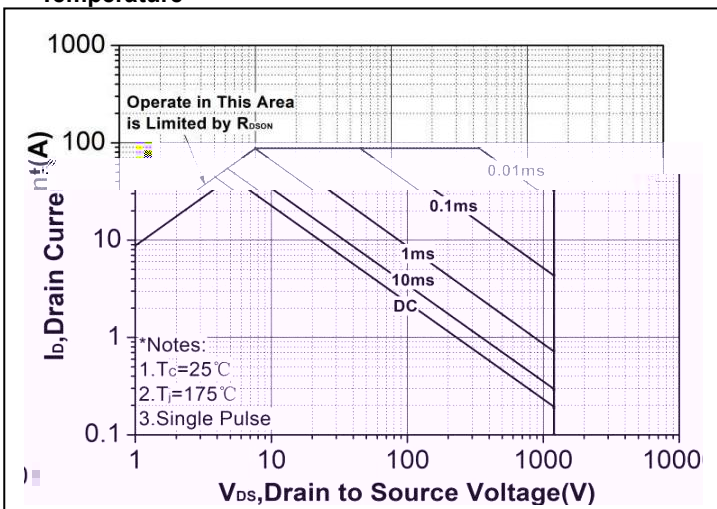


Figure22.Safe Operating Area

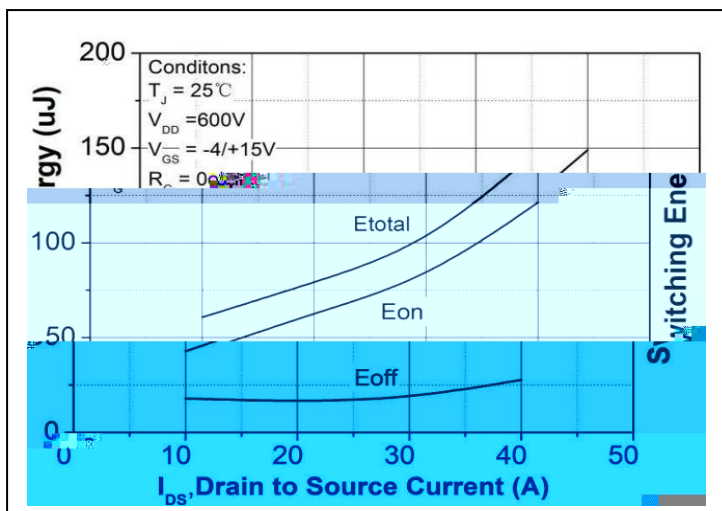


Figure23.Clamped Inductive Switching Energy vs. Drain Current (VDD = 600V)

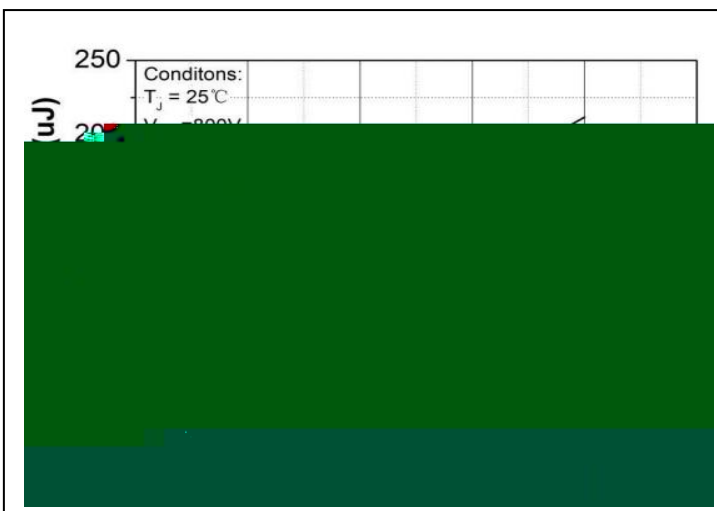
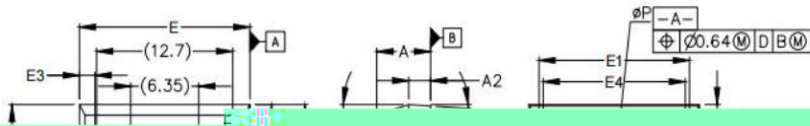


Figure24.Clamped Inductive Switching Energy vs. Drain Current (VDD = 800V)

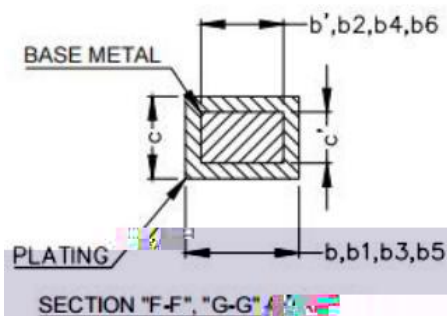
Mechanical Data

Unit:mm



SYMBOL	MILLIMETERS	
	MIN	MAX
A	4.83	5.21
A1	2.29	2.54
A2	1.91	2.16
b	1.07	1.28

D	1.07	1.33
b1	2.39	2.94
b2	2.39	2.84
b3	1.97	1.60
b4	1.07	1.50
b5	2.39	2.69
b6	2.39	2.64
c'	0.55	0.65
c	0.55	0.68
D	23.30	23.60
D1	16.25	17.65
D2	0.95	1.25
E	15.75	16.13
E1	13.10	14.15
E2	3.68	5.10
E3	1.00	1.90
E4	12.38	13.43
e	2.54 BSC	
e1	5.08 BSC	
N	4	
L	17.31	17.82
L1	3.97	4.37
L2	2.35	2.65
P	3.51	3.65
Q	5.49	6.00
S	6.04	6.30
T	17.5° REF.	
W	3.5° REF.	
X	4° REF.	



ATTENTION: