



SPP3095

P-Channel Enhancement Mode MOSFET

DESCRIPTION

The SPP3095 is the P-Channel logic enhancement mode power field effect transistors are produced using high cell density , DMOS trench technology.

This high density process is especially tailored to minimize on-state resistance. These devices are particularly suited for low voltage application, such as DC/DC converter and Desktop computer power management.

The package is universally preferred for commercial industrial surface mount applications

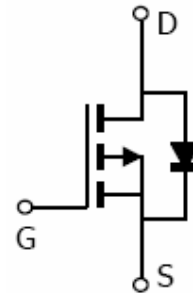
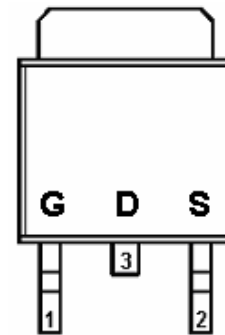
FEATURES

- ◆ -30V/- 8A, $R_{DS(ON)}=100m\Omega@V_{GS}=-10V$
- ◆ -30V/- 6A, $R_{DS(ON)}=150m\Omega@V_{GS}=-4.5V$
- ◆ Super high density cell design for extremely low $R_{DS(ON)}$
- ◆ Exceptional on-resistance and maximum DC current capability
- ◆ TO-252-2L package design

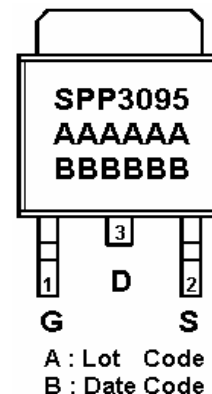
APPLICATIONS

- Power Management in Desktop Computer
- DC/DC Converter
- LCD Display inverter

PIN CONFIGURATION (TO-252-2L)



PART MARKING





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PIN DESCRIPTION

Pin	Symbol	Description
1	G	Gate
2	S	Source
3	D	Drain

ORDERING INFORMATION

Part Number	Package	Part Marking
SPP3095T252RG	TO-252-2L	SPP3095
SPP3095T252RGB	TO-252-2L	SPP3095

- ※ Week Code : A ~ Z (1 ~ 26) ; a ~ z (27 ~ 52)
- ※ SPP3095T252RG : Tape Reel ; Pb – Free
- ※ SPP3095T252RGB : Tape Reel ; Pb – Free ; Halogen - Free

ABSOLUTE MAXIMUM RATINGS

($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Parameter	Symbol	Typical	Unit	
Drain-Source Voltage	V_{DSS}	-30	V	
Gate –Source Voltage	V_{GSS}	± 20	V	
Continuous Drain Current($T_J=150^{\circ}\text{C}$)	I_{D}	$T_A=25^{\circ}\text{C}$	-12	A
		$T_A=70^{\circ}\text{C}$	-8	
Pulsed Drain Current	I_{DM}	-20	A	
Continuous Source Current(Diode Conduction)	I_{S}	-15	A	
Power Dissipation	P_{D}	$T_A=25^{\circ}\text{C}$	40	W
		$T_A=70^{\circ}\text{C}$	20	
Operating Junction Temperature	T_J	-55/150	$^{\circ}\text{C}$	
Storage Temperature Range	T_{STG}	-55/150	$^{\circ}\text{C}$	
Thermal Resistance-Junction to Ambient	$R_{\theta\text{JA}}$	105	$^{\circ}\text{C}/\text{W}$	



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ELECTRICAL CHARACTERISTICS

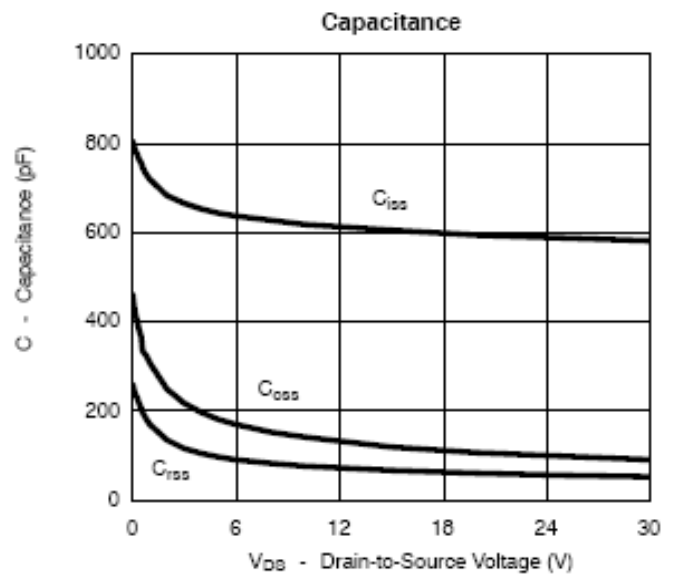
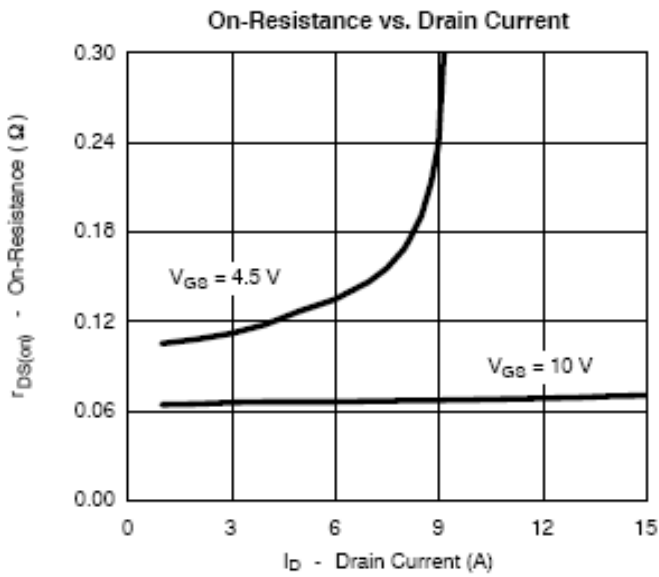
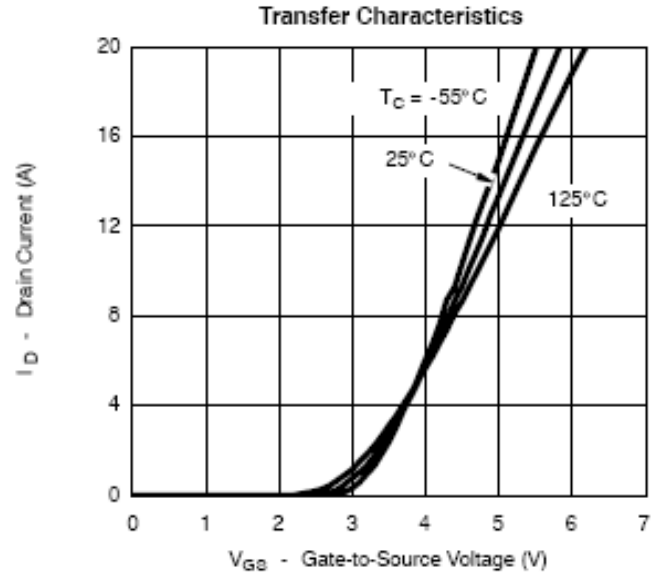
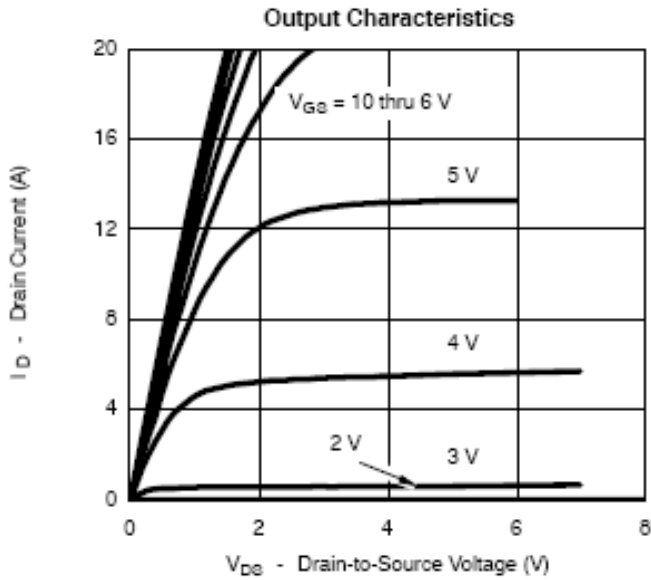
(TA=25°C Unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-1.0		-3.0	
Gate Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-24V, V_{GS}=0V$			-1	uA
		$V_{DS}=-24V, V_{GS}=0V$ $T_J=85^\circ C$			-5	
Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-8A$		0.083	0.100	Ω
		$V_{GS}=-4.5V, I_D=-6A$		0.130	0.150	
Forward Transconductance	g_{fs}	$V_{DS}=-10V, I_D=-8A$		8		S
Diode Forward Voltage	V_{SD}	$I_S=-2.5A, V_{GS}=0V$		-0.8	-1.2	V
Dynamic						
Total Gate Charge	Q_g	$V_{DS}=-15V, V_{GS}=-10V$ $I_D=-8A$		5.8	10	nC
Gate-Source Charge	Q_{gs}			0.8		
Gate-Drain Charge	Q_{gd}			1.5		
Input Capacitance	C_{iss}	$V_{DS}=-15V, V_{GS}=0V$ $f=1MHz$		226		pF
Output Capacitance	C_{oss}			87		
Reverse Transfer Capacitance	C_{rss}			19		
Turn-On Time	$t_{d(on)}$	$V_{DD}=-15V, R_L=15\Omega$ $I_D=-1.0A, V_{GEN}=-10V$ $R_G=6\Omega$		9	20	ns
	t_r			9	20	
Turn-Off Time	$t_{d(off)}$			18	35	
	t_f			6	20	



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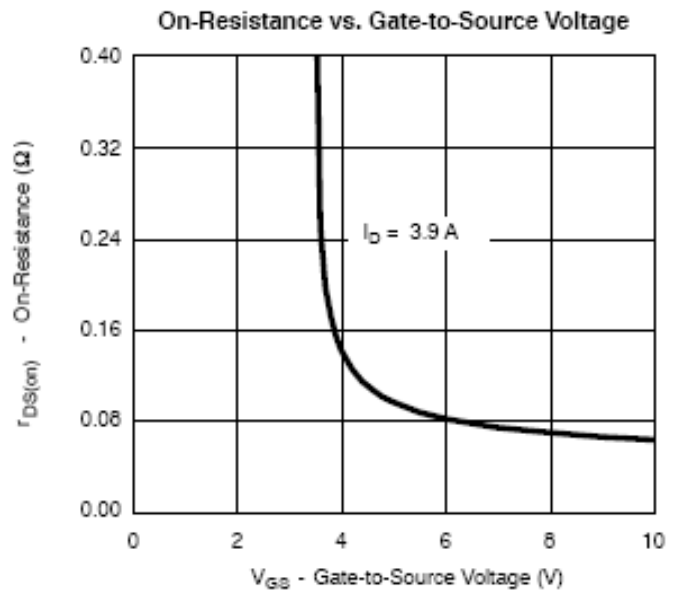
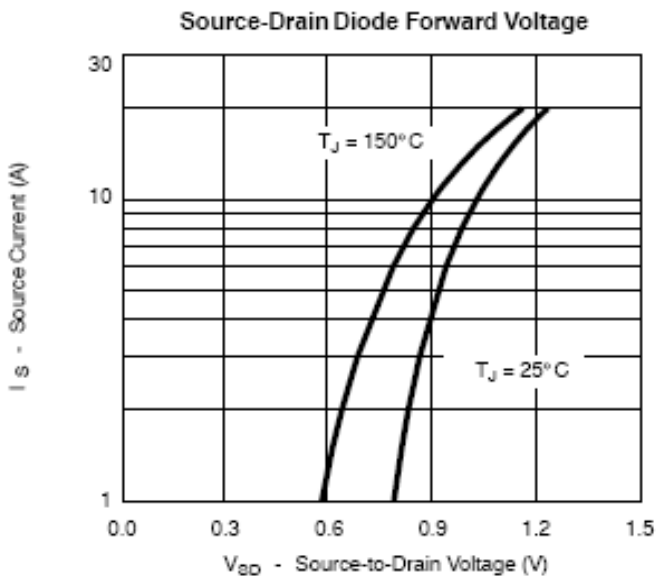
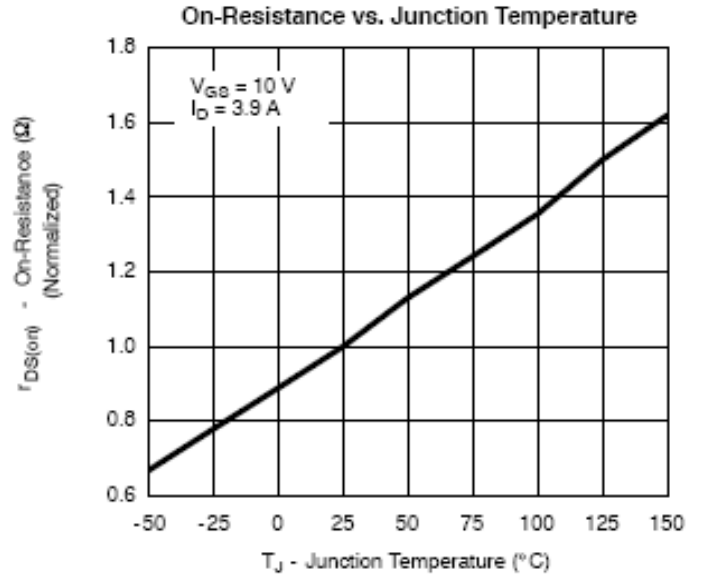
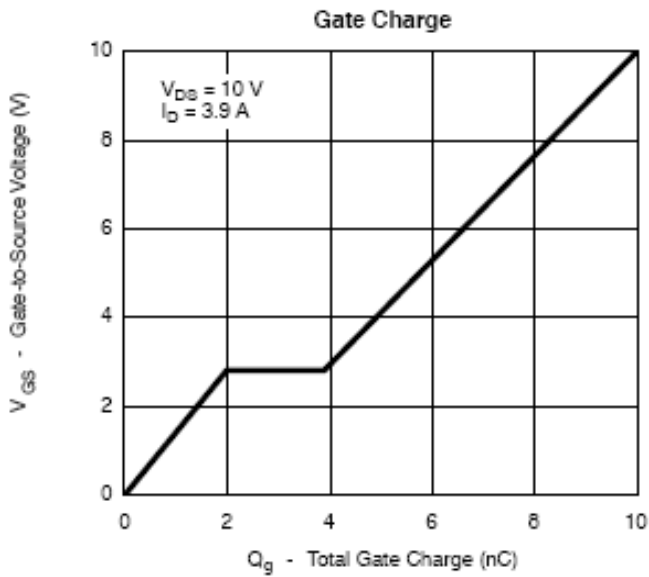
TYPICAL CHARACTERISTICS





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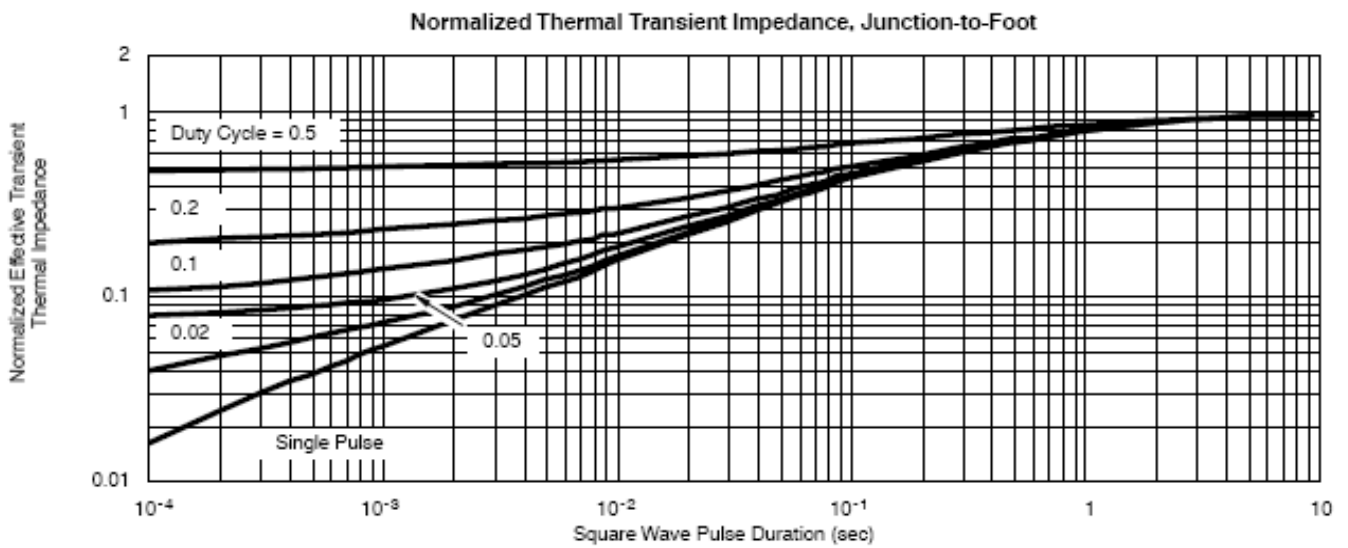
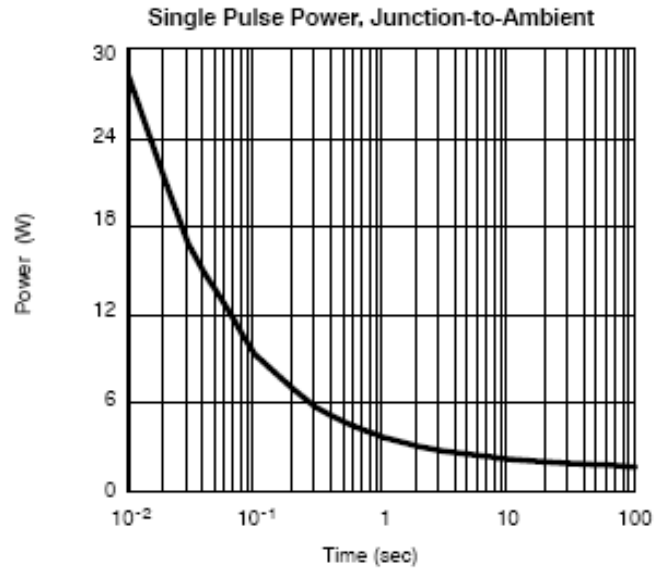
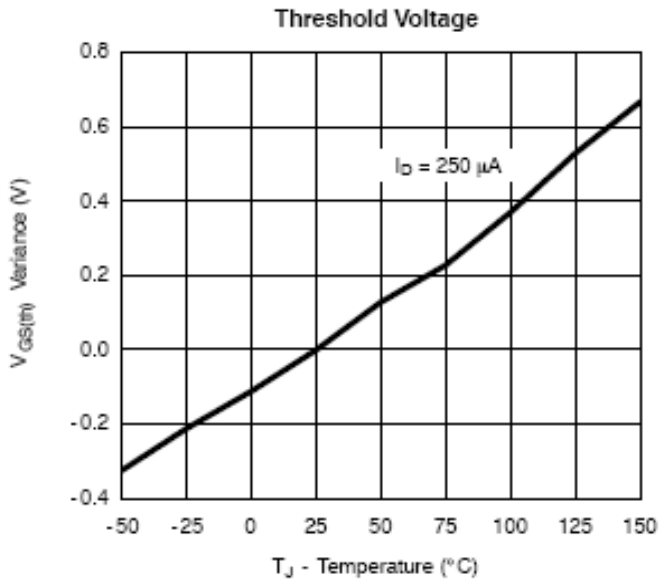
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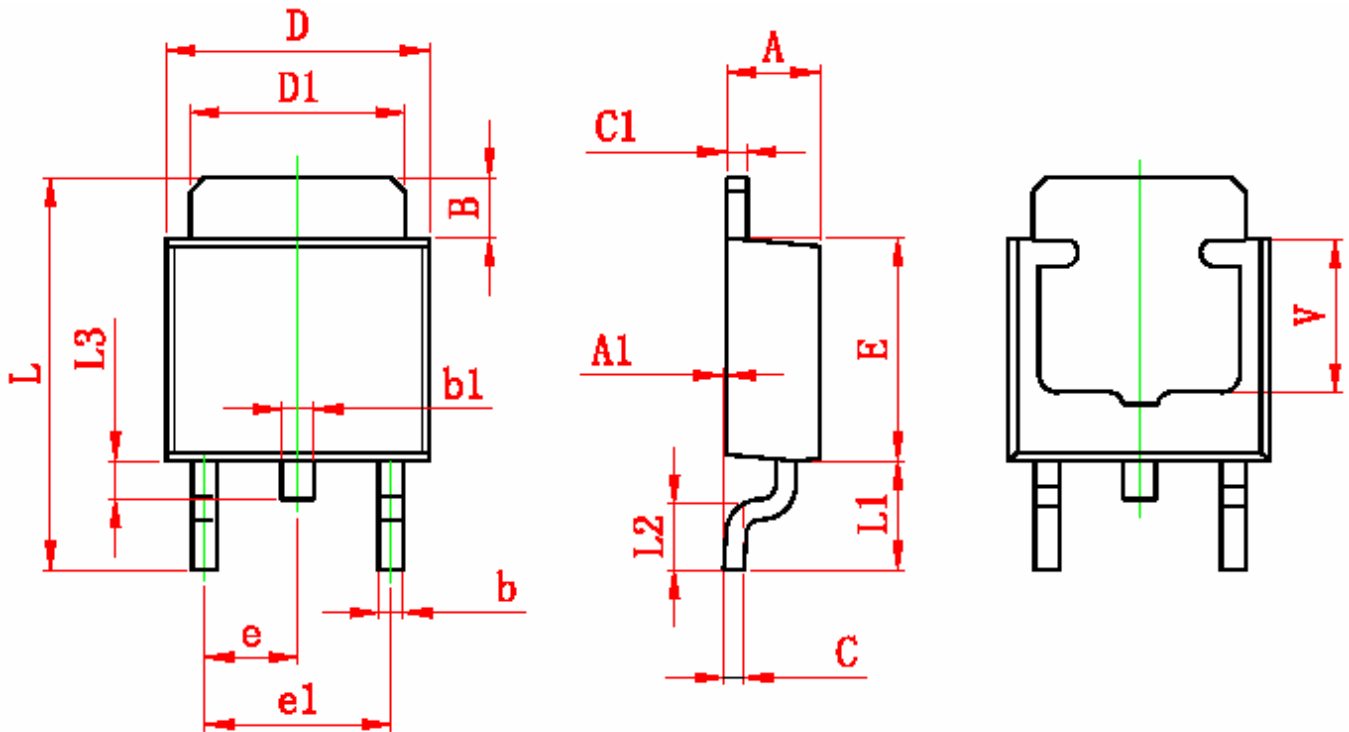




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TO-252-2L PACKAGE OUTLINE



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
B	1.350	1.650	0.053	0.065
b	0.500	0.700	0.020	0.028
b1	0.700	0.900	0.028	0.035
c	0.430	0.580	0.017	0.023
c1	0.430	0.580	0.017	0.023
D	6.350	6.650	0.250	0.262
D1	5.200	5.400	0.205	0.213
E	5.400	5.700	0.213	0.224
e	2.300 TYP.		0.091 TYP.	
e1	4.500	4.700	0.177	0.185
L	9.300	9.900	0.366	0.390
L1	2.550	2.900	0.100	0.114
L2	1.400	1.780	0.055	0.070
L3	0.600	0.900	0.024	0.035
V	3.800 REF.		0.150 REF.	



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