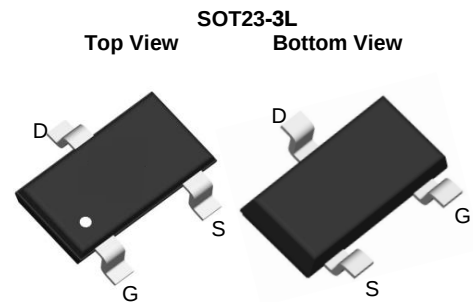
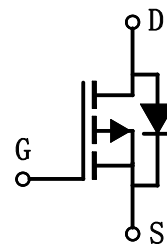


- -30V/-4.3A
- $R_{DS(ON)}=40m\Omega$ (typ) @VGS=10V
 $R_{DS(ON)}=51m\Omega$ (typ) @VGS=4.5V
- 100% UIS & RG Tested
- Reliable and Rugged
- Lead Free and Green Devices Available (RoHS Compliant)



Applic

- Power Management in Desktop Computer or DC/DC Converters.
- Power Load Switch.
- Notebook Battery Management.



P-Channel MOSFET

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

Symbol	Parameter		Rating	Unit
Common Ratings				
V _{DSS}	Drain-Source Voltage		-30	V
V _{GSS}	Gate-Source Voltage		±20	
I _D	Continuous Drain Current (V _{GS} =-4.5V)	TJ=150°C	-4.3	A
I _{DM}	Pulsed Drain Current		-25	A
I _S	Diode Continuous Forward Current		-4.3	
T _{STG} , T _j	Storage Temperature Range		-55 to 150	°C
P _D	Power Dissipation	T _A =25°C	1.4	W
		T _A =70°C	0.9	
R _{θJA}	Thermal Resistance-Junction to Ambient ⁴⁾		120	°C/W

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress rating only and functional device operation is not implied

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

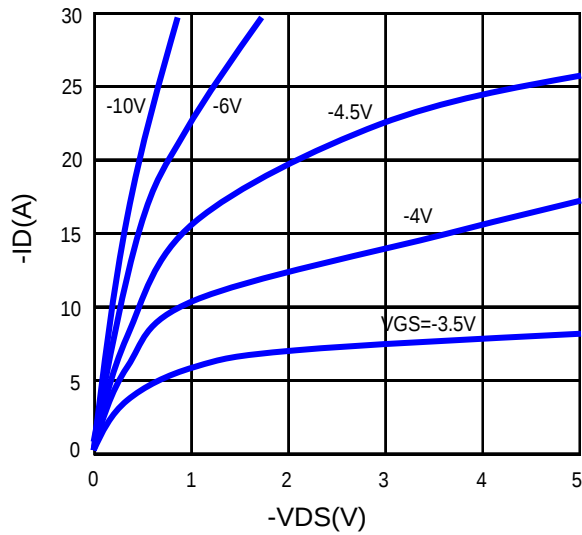
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _{DS} =250μA	-30	-	-	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-30V, V _{GS} =0V	-	-	-1	μA
		V _{DS} =-30V, V _{GS} =0V,T	-		-10	
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _{DS} =-250μA	-1.0	-1.5	-2.0	V
I _{GSS}	Gate Leakage Current	V _{GS} =±20V, V _{DS} =0V	-	-	±100	nA
R _{DS(ON)}	Drain-Source On-state Resistance	V _{GS} =-10V, I _{DS} =-4.3A	-	40	50	mΩ
		V _{GS} =-4.5V, I _{DS} =-3A	-	51	65	
Body Diode Characteristics						
V _{SD}	Diode Forward Voltage	I _{SD} =-1A, V _{GS} =0V	-	-0.7	-1.0	V
Dynamic Characteristics						
C _{ISS}	Input Capacitance	V _{GS} =0V, V _{DS} =-15V, Frequency=1.0MHz	-	655	-	pF
C _{OSS}	Output Capacitance		-	195	-	
C _{rSS}	Reverse transfer capacitance		-	82	-	
t _{d(ON)}	Turn-on delay Time	VGS=-10V ,VDS=-15V RG=6Ω, ID=-1A RL=15Ω	-	12	-	nS
t _r	Turn-on rise Time		-	6	-	
t _{d(OFF)}	Turn-off delay Time		-	26	-	
t _f	Turn-off rise Time		-	11	-	
Gate Charge Characteristics						
Q _g	Total Gate Charge	V _{DS} =-15V, V _{GS} =-10V, I _{DS} =-4A	-	9	-	nC
Q _{gs}	Gate-Source Charge		-	2	-	
Q _{gd}	Gate-Drain Charge		-	3.5	-	

Note: 1. Pulse test: pulse width $\leq$ 300uS, duty cycle $\leq$ 2%

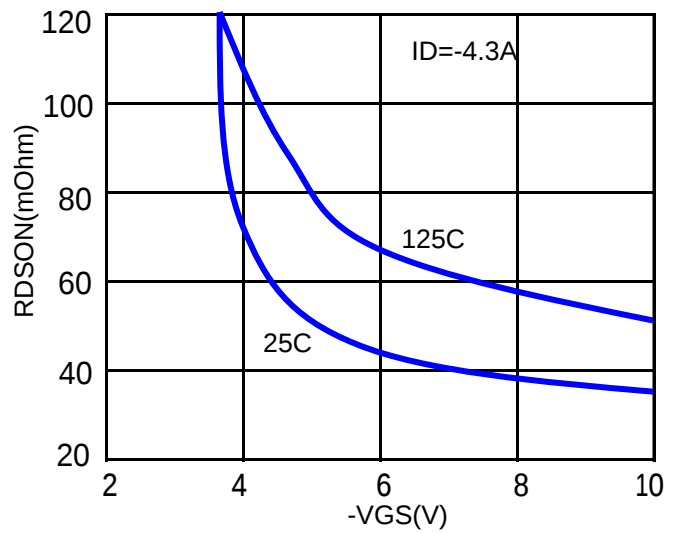
2.Static parameters are based on package level with recommended wire bonding

■ TYPICAL CHARACTERISTICS (25 °C Unless Note)

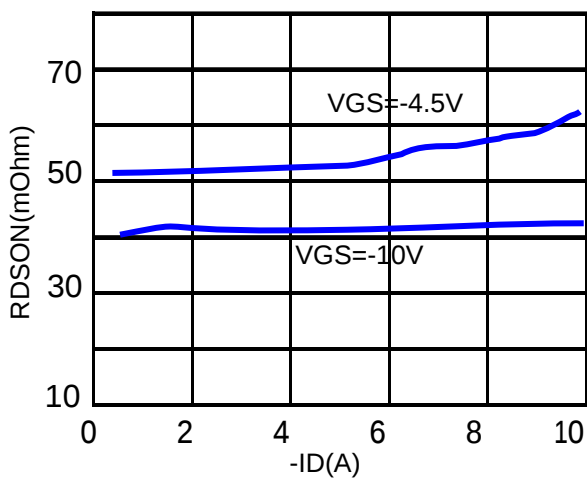
Output Characteristics



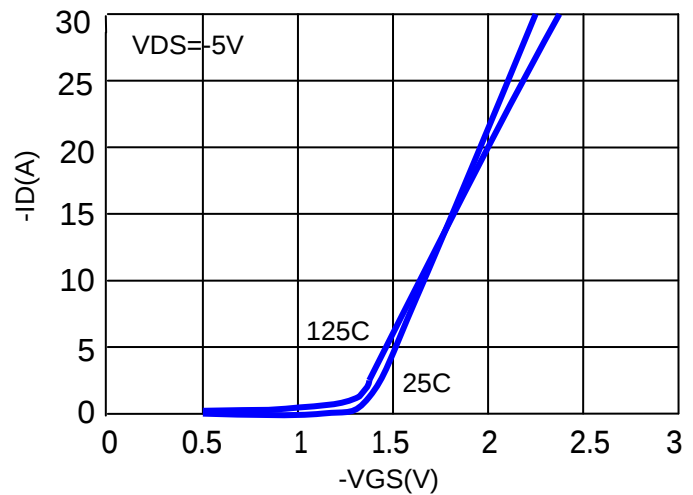
Drain-Source On Resistance



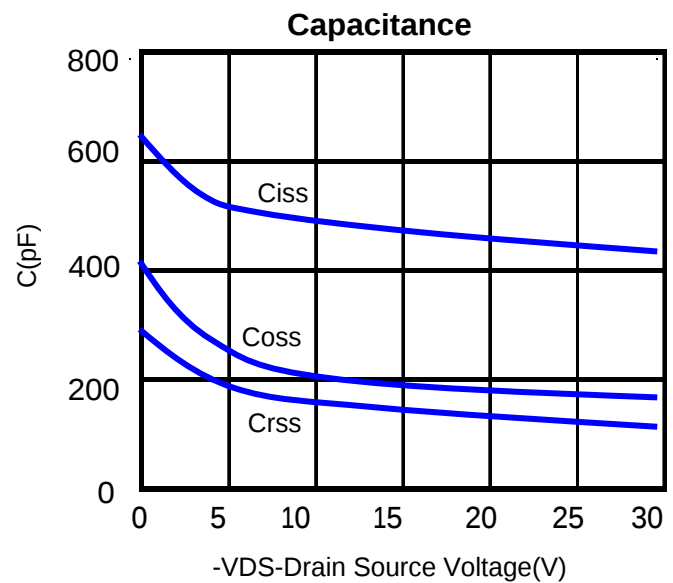
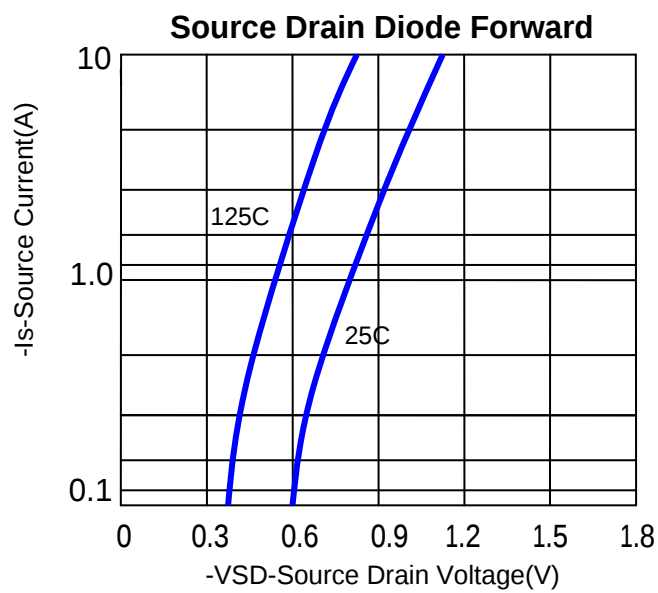
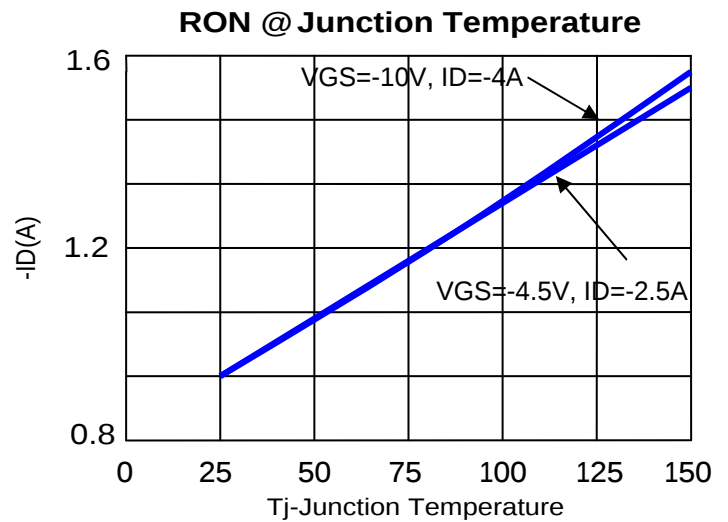
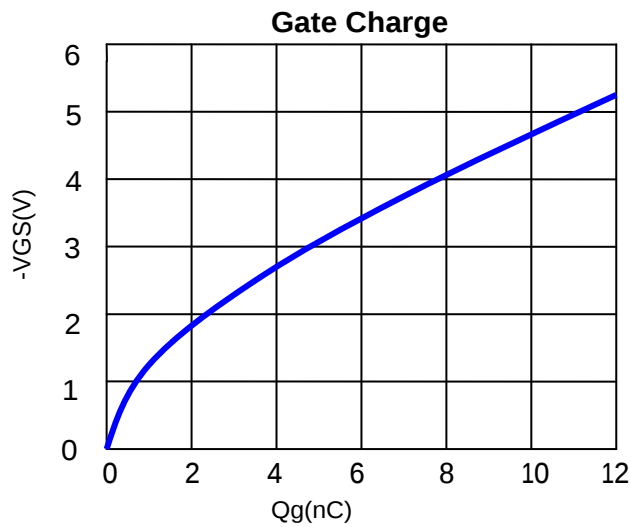
Drain-Source On Resistance



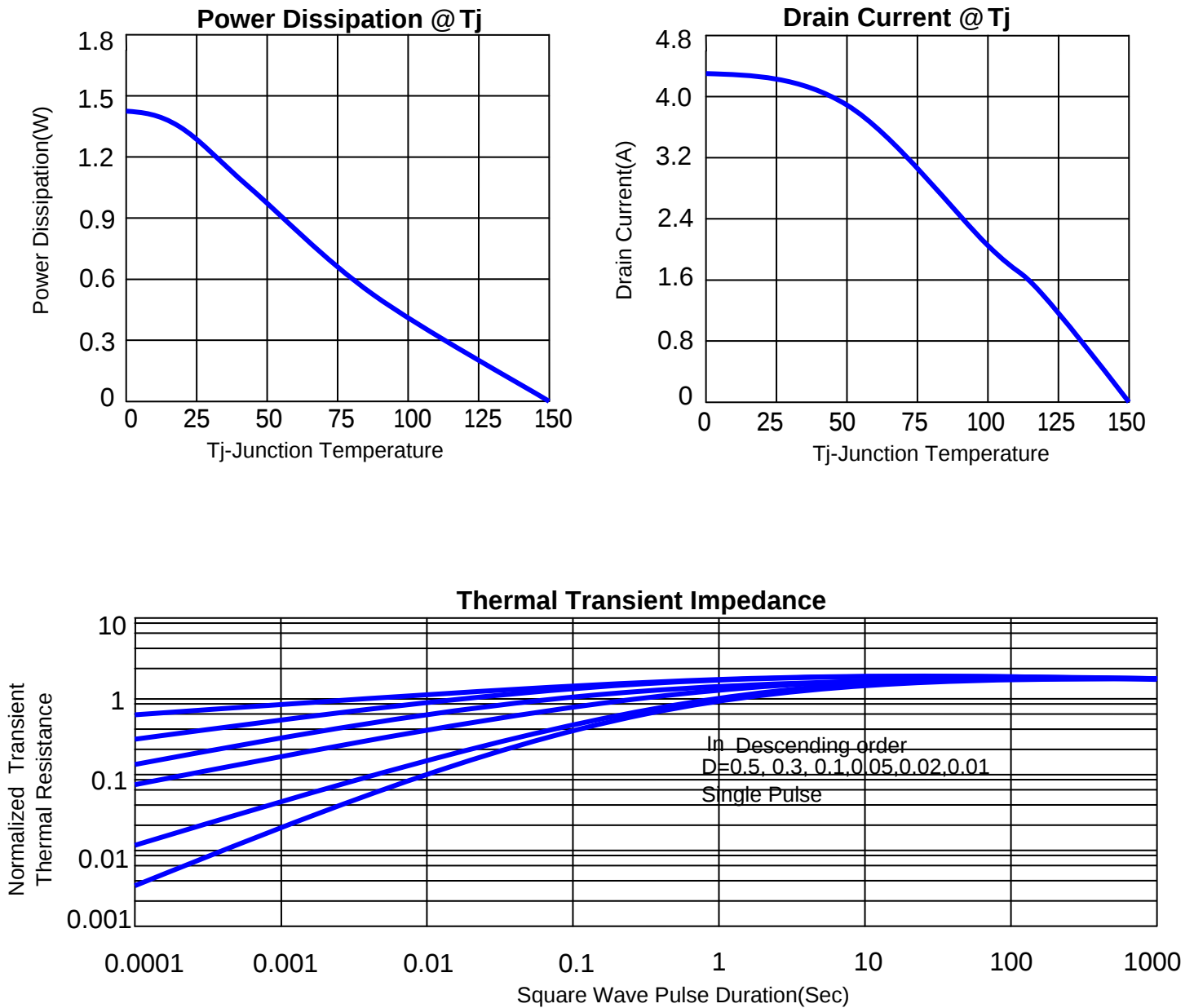
Transfer Characteristics



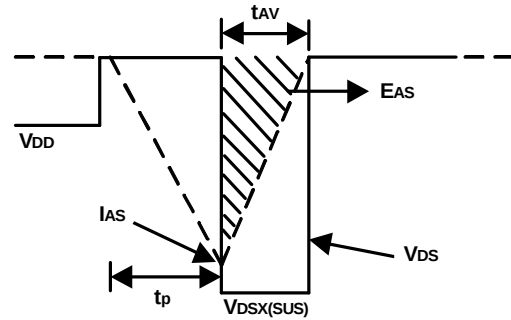
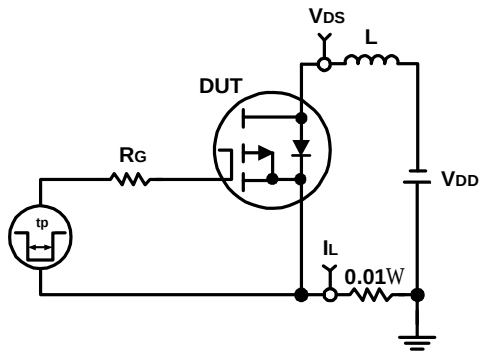
■ TYPICAL CHARACTERISTICS (25 °C Unless Note)



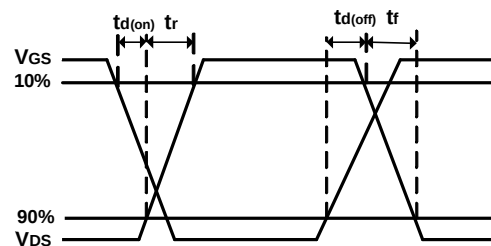
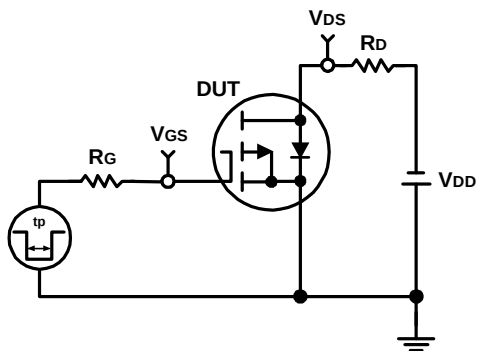
■ TYPICAL CHARACTERISTICS (continuous)



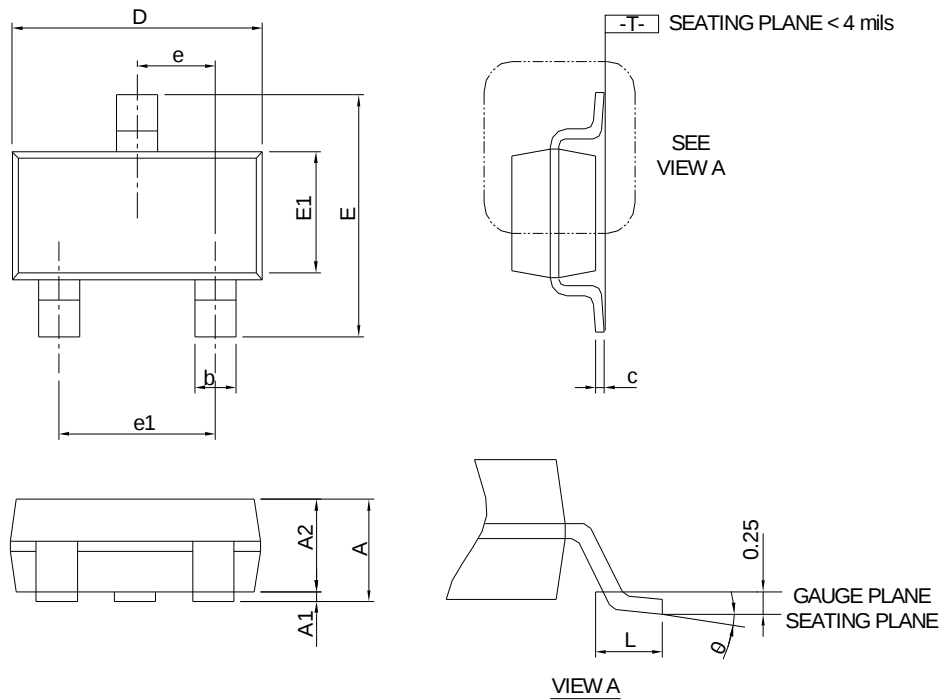
Avalanche Test Circuit and Waveforms



Switching Time Test Circuit and Waveforms

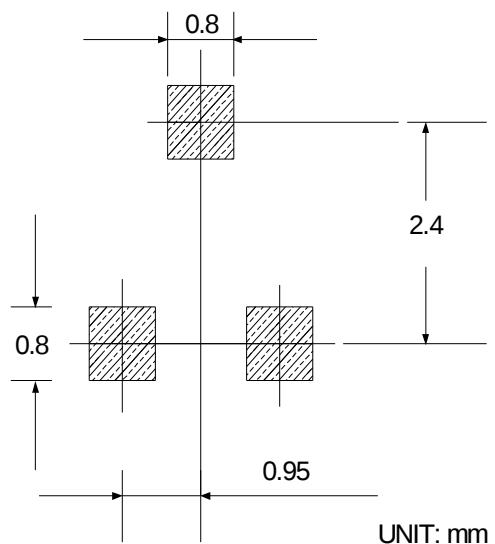


■ SOT23-3L PACKAGE OUTLINE DIMENSIONS



SYMBOL	SOT23-3L			
	MILLIMETERS		INCHES	
	MIN.	MAX.	MIN.	MAX.
A		1.20		0.047
A1	0.00	0.08	0.000	0.003
A2	0.90	1.12	0.035	0.044
b	0.30	0.50	0.012	0.020
c	0.08	0.22	0.003	0.009
D	2.70	3.10	0.106	0.122
E	2.60	3.00	0.102	0.118
E1	1.40	1.80	0.055	0.071
e	0.95 BSC		0.037 BSC	
e1	1.90 BSC		0.075 BSC	
L	0.30	0.60	0.012	0.024
θ	0°	8°	0°	8°

RECOMMENDED LAND PATTERN



Note : Dimension D and E1 do not include mold flash, protrusions or gate burrs. Mold flash, protrusion or gate burrs shall not exceed 10 mil per side.