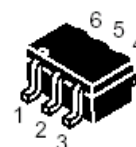


# Silicon NPN Epitaxial Planer Transistor(Tr1)

# Silicon PNP Epitaxial Planer Transistor(Tr2)

L4601DW1T1



SC88

● Tr1

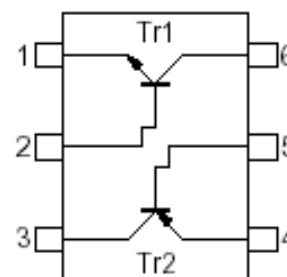
**MAXIMUM RATINGS**

Parameter	Symbol	Ratings	Unit
Collector-Emitter Voltage	$V_{CEO}$	50	V
Collector-Base Voltage	$V_{CBO}$	60	V
Emitter-Base Voltage	$V_{EBO}$	6	V
Collector current-continuoun	IC	150	mAdc

● Tr2

**MAXIMUM RATINGS**

Parameter	Symbol	Ratings	Unit
Collector-Emitter Voltage	$V_{CEO}$	-50	V
Collector-Base Voltage	$V_{CBO}$	-60	V
Emitter-Base Voltage	$V_{EBO}$	-6	V
Collector current-continuoun	IC	-150	mAdc



**THERMAL CHARATEERISTICS**

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, (1) $T_A=25^{\circ}C$	$P_D$	380	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	328	$^{\circ}C/W$
Junction and Storage Temperature	$T_j, T_{stg}$	-55 to +150	$^{\circ}C$

**DEVICE MARKING**

L4601DW1T1=5C

● Tr1

**ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)**

Characteristic	Symbol	Min	Typ	Max	Unit
<b>OFF CHARACTERISTICS</b>					
Collector-Emitter Breakdown Voltage (IC=1mA)	V(BR)CEO	50	-	-	V
Emitter-Base Breakdown Voltage (IE=50 μ A)	V(BR)EBO	6	-	-	V
Collector-Base Breakdown Voltage (IC=50 μ A)	V(BR)CBO	60	-	-	V
Collector Cutoff Current (VCB=60V)	ICBO	-	-	0.1	μ A
EMITTER CUTOFF CURRENT VEB=7V	IEBO	-	-	0.1	μ A

**ON CHARACTERISTICS**

DC Current Gain (IC=1mA, VCE=6.0V)	Hfe	120	-	560	
Collector-Emitter Saturation Voltage (IC=50mA, IB=5mA)	VCE(SAT)	-	-	0.4	V

**SMALL-SIGNAL CHARACTERISTICS**

Current-Gain-Bandwidth Product (VCE = 12.0V; IE =-2.0 mA, f=100MHZ)	Ft	-	180	-	MHz
Output Capacitance(VCE=12V, f=1.0MHz)	Cobo	-	2	3.5	Pf

● Tr2

**ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)**

Characteristic	Symbol	Min	Typ	Max	Unit
<b>OFF CHARACTERISTICS</b>					
Collector-Emitter Breakdown Voltage (IC=-1mA)	V(BR)CEO	-50	-	-	V
Emitter-Base Breakdown Voltage (IE=-50 μ A)	V(BR)EBO	-6	-	-	V
Collector-Base Breakdown Voltage (IC=-50 μ A)	V(BR)CBO	-60	-	-	V
Collector Cutoff Current (VCB=-60V)	ICBO	-	-	-0.1	μ A
Emitter Cutoff Current (VBE=-6V)	IEBO	-	-	-0.1	μ A

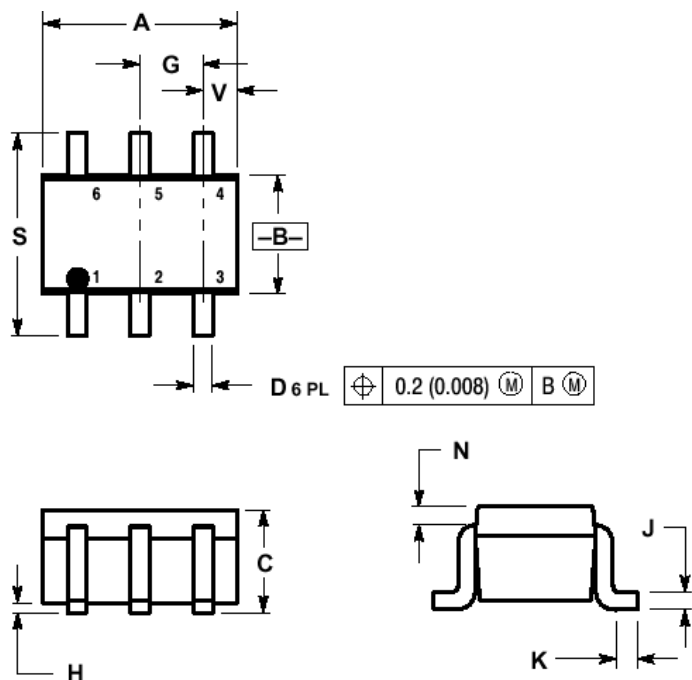
**ON CHARACTERISTICS**

DC Current Gain ( $I_C = -1\text{mA}$ , $V_{CE} = -6.0\text{V}$ )	Hfe	120	-	560	
Collector-Emitter Saturation Voltage ( $I_C = -50\text{mA}$ , $I_B = -5\text{mA}$ )	$V_{CE(SAT)}$	-	-	-0.5	V

**SMALL-SIGNAL CHARACTERISTICS**

Current-Gain-Bandwidth Product ( $V_{CE} = -12.0\text{V}$ ; $I_E = 2.0\text{mA}$ , $f = 300\text{MHz}$ )	Ft	-	140	-	MHz
Output Capacitance( $V_{CB} = -12\text{V}$ , $f = 1.0\text{MHz}$ )	Cobo	-	4	5	Pf

**PACKAGE DIMENSIONS  
SC-88**



**NOTES:**

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.031	0.043	0.80	1.10
D	0.004	0.012	0.10	0.30
G	0.026BSC		0.65BSC	
H	—	0.004	—	0.10
J	0.004	0.010	0.10	0.25
K	0.004	0.012	0.10	0.30
N	0.008 REF		0.20 REF	
S	0.079	0.087	2.00	2.20
V	0.012	0.016	0.30	0.40