



DATA SHEET

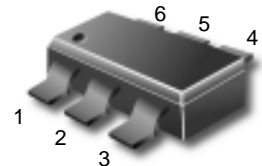
SEMICONDUCTOR

4501DW

Silicon NPN Epitaxial Planer Transistor

Feature

Pb-Free Package is available.



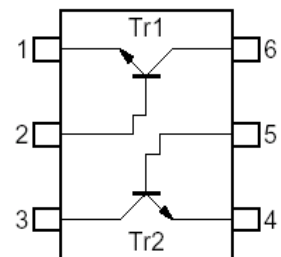
SC-88/SOT-363

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}	7	V
Collector current-continuoun	I_C	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

4501DW=5H

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}C$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage ($I_C=1mA$)	$V_{(BR)CEO}$	50	-	-	V
Emitter-Base Breakdown Voltage ($I_E=50 \mu A$)	$V_{(BR)EBO}$	7	-	-	V
Collector-Base Breakdown Voltage ($I_C=50 \mu A$)	$V_{(BR)CBO}$	60	-	-	V
Collector Cutoff Current ($V_{CB}=60V$)	I_{CBO}	-	-	0.1	μA

4501DW

EMITTER CUTOFF CURRENT VEB=7V	IEBO	-	-	0.1	μ A
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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

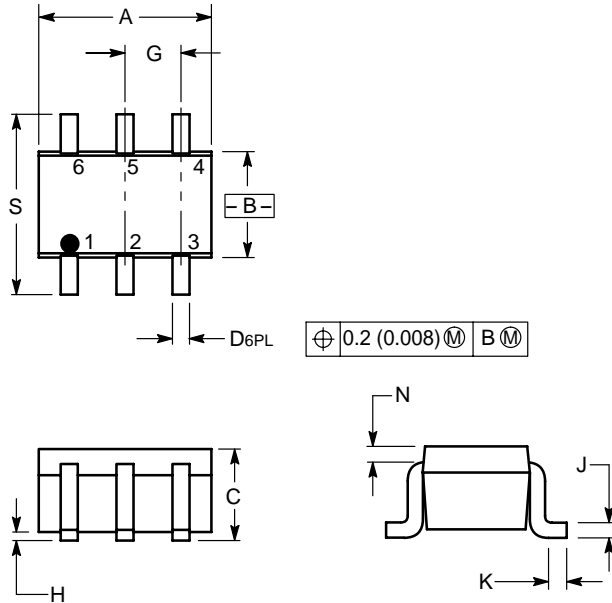
ORDERING INFORMATION

Device	Marking	Shipping
4501DW	5H	3000/Tape&Reel
4501DW	5H	10000/Tape&Reel

PACKAGE OUTLINE & DIMENSIONS

4501DW

SC-88/SOT-363



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	0.026 BSC		0.65 BSC	
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

- PIN 1. EMITTER 1
- 2. BASE 1
- 3. COLLECTOR 2
- 4. EMITTER 2
- 5. BASE 2
- 6. COLLECTOR 1

