



High-reliability discrete products  
and engineering services since 1977

# 2N5629 – NPN 2N6029 – PNP

## COMPLEMENTARY SILICON POWER TRANSISTORS

### FEATURES:

- Available as “HR” (high reliability) screened per MIL-PRF-19500, JANTX level. Add “HR” suffix to base part number
- Available Non-RoHS (standard) or RoHS compliant (add PBF suffix)

### MAXIMUM RATINGS

Ratings	Symbol	Value	Unit
<b>Collector-Emitter Voltage</b> $I_B = 0$	$V_{CE0}$	100	V
<b>Collector-Base Voltage</b> $I_E = 0$	$V_{CBO}$	100	V
<b>Emitter-Base Voltage</b> $I_C = 0$	$V_{EBO}$	7	V
<b>Collector Current -Continuous</b> Peak	$I_C$	16 20	A
<b>Base Current</b>	$I_B$	20	A
<b>Total Power Dissipation</b> @ $T_C \leq 25^\circ\text{C}$	$P_T$	200	W
<b>Operating Junction Temperature Range</b>	$T_J, T_{STG}$	-65 to +200	$^\circ\text{C}$

For PNP voltage and current values are negative.

### ELECTRICAL CHARACTERISTICS @ 25°C unless otherwise noted

Characteristics	Symbol	Min	Typ	Max	Unit
<b>Collector Cutoff Current</b> $I_B = 0, V_{CE} = 50\text{V}$	$I_{CE0}$	-	-	1	mA
<b>Emitter Cutoff Current</b> $I_C = 0, V_{EB} = 7\text{V}$	$I_{EBO}$	-	-	1	mA
<b>Collector Cutoff Current</b> $I_E = 0, V_{CB} = 100\text{V}$	$I_{CBO}$	-	-	1	mA
<b>Collector-Emitter Sustaining Voltage<sup>(1)</sup></b> $V_{BE} = -1.5\text{V}, I_C = 200\text{mA}$	$V_{CE0(sus)}$	100	-	-	V
<b>DC Current Gain<sup>(1)</sup></b> $I_C = 8\text{A}, V_{CE} = 2\text{V}$ $I_C = 16\text{A}, V_{CE} = 2\text{V}$	$h_{FE}$	25 4	- -	100 -	-
<b>Collector-Emitter Saturation Voltage<sup>(1)</sup></b> $I_C = 10\text{A}, I_B = 1\text{A}$ $I_C = 16\text{A}, I_B = 4\text{A}$	$V_{CE(sat)}$	- -	- -	1 2	V
<b>Base-Emitter Saturation Voltage<sup>(1)</sup></b> $I_C = 10\text{A}, I_B = 1\text{A}$	$V_{BE(sat)}$	-	-	1.8	V
<b>Base-Emitter Voltage<sup>(1)</sup></b> $I_C = 8\text{A}, I_B = 1\text{A}$	$V_{BE}$	-	-	1.5	V

# 2N5629 – NPN

# 2N6029 – PNP

## COMPLEMENTARY SILICON POWER TRANSISTORS

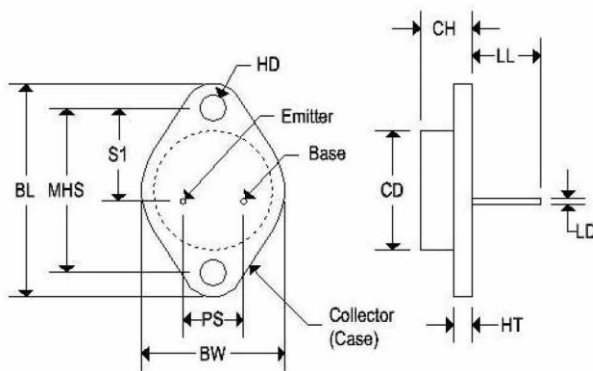
### ELECTRICAL CHARACTERISTICS @ 25°C unless otherwise noted

Characteristics	Symbol	Min	Typ	Max	Unit
<b>Transition Frequency</b> $I_C = 1A, V_{CE} = 20V, f = 0.5MHz$	$f_T$	1	-	-	MHz
<b>Collector-Base Capacitance (2N6029)</b> $V_{CB} = 10V, I_E = 0, f = 0.1MHz$	$C_{CBO}$	-	-	500 1000	pF
<b>Small Signal Current Gain</b> $I_C = 4A, V_{CE} = 10V, f = 1KHz$	$h_{fe}$	15	-	-	-

Note 1: Pulse width = 350μs, duty cycle ≤ 0.02

### MECHANICAL CHARACTERISTICS

Case	TO-3
Marking	Alpha-numeric
Pin out	See below



	TO-3			
	Inches		Millimeters	
	Min	Max	Min	Max
CD	-	0.875	-	22.220
CH	0.250	0.380	6.860	9.650
HT	0.060	0.135	1.520	3.430
BW	-	1.050	-	26.670
HD	0.131	0.188	3.330	4.780
LD	0.038	0.043	0.970	1.090
LL	0.312	0.500	7.920	12.700
BL	1.550 REF		39.370 REF	
MHS	1.177	1.197	29.900	30.400
PS	0.420	0.440	10.670	11.180
S1	0.655	0.675	16.640	17.150