



2N6050/51/52
2N6057/58/59

POWER COMPLEMENTARY SILICON TRANSISTORS

The 2N6050, 2N6051 and 2N6052 are silicon epitaxial-base PNP transistors in monolithic Darlington configuration mounted in Jedec TO-3 metal case. They are intended for use in power linear and low frequency switching applications. The complementary NPN types are 2N6057, 2N6058 and 2N6059 respectively.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings			Value	Unit
V_{CBO}	Collector-Base Voltage	$I_E=0$	2N6050 2N6057	60	V
			2N6051 2N6058	80	
			2N6052 2N6059	100	
V_{CEO}	Collector-Emitter Voltage	$I_B=0$	2N6050 2N6057	60	V
			2N6051 2N6058	80	
			2N6052 2N6059	100	
V_{CEX}	Collector-Emitter Voltage	$V_{BE}=-1.5\text{ V}$	2N6050 2N6057	60	V
			2N6051 2N6058	80	
			2N6052 2N6059	100	
V_{EBO}	Emitter-Base Voltage	$I_C=0$	2N6050 2N6057	5.0	V
			2N6051 2N6058		
			2N6052 2N6059		

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I_C	Collector Current		2N6050 2N6057 2N6051 2N6058 2N6052 2N6059	12	A
I_{CM}	Collector Peak Current		2N6050 2N6057 2N6051 2N6058 2N6052 2N6059	20	A
I_B	Base Current		2N6050 2N6057 2N6051 2N6058 2N6052 2N6059	0.2	mA
P_T	Power Dissipation	@ $T_C < 25^\circ$	2N6050 2N6057 2N6051 2N6058 2N6052 2N6059	150	Watts
$T_J T_s$	Junction Storage Temperature		2N6050 2N6057 2N6051 2N6058 2N6052 2N6059	200 -65 to +200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Symbol	Ratings		Value	Unit
R_{thJ-C}	Thermal Resistance, Junction to Case	2N6050 2N6057 2N6051 2N6058 2N6052 2N6059	1.17	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

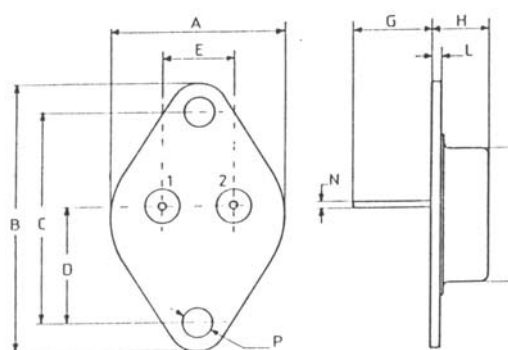
TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
I_{CEX}	Collector Cutoff Current	$V_{CE} = V_{CEX} = 60 \text{ V}, V_{BE} = -1.5 \text{ V}$	2N6050 2N6057	-	-	500 μA
		$V_{CE} = V_{CEX} = 80 \text{ V}, V_{BE} = -1.5 \text{ V}$	2N6051 2N6058	-	-	
		$V_{CE} = V_{CEX} = 100 \text{ V}, V_{BE} = -1.5 \text{ V}$	2N6052 2N6059	-	-	
		$V_{CE} = V_{CEX} = 60 \text{ V}, V_{BE} = -1.5 \text{ V}, T_C = 150^\circ\text{C}$	2N6050 2N6057	-	-	5 mA
		$V_{CE} = V_{CEX} = 80 \text{ V}, V_{BE} = -1.5 \text{ V}, T_C = 150^\circ\text{C}$	2N6051 2N6058	-	-	
		$V_{CE} = V_{CEX} = 100 \text{ V}, V_{BE} = -1.5 \text{ V}, T_C = 150^\circ\text{C}$	2N6052 2N6059	-	-	
I_{CEO}	Collector Cutoff Current	$V_{CE} = 30 \text{ Vdc}, I_B = 0$	2N6050 2N6057	-	-	1.0 mA
		$V_{CE} = 40 \text{ Vdc}, I_B = 0$	2N6051 2N6058	-	-	
		$V_{CE} = 50 \text{ Vdc}, I_B = 0$	2N6052 2N6059	-	-	
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 5 \text{ V}$	2N6050 2N6057	-	-	2.0 mA
			2N6051 2N6058	-	-	
			2N6052 2N6059	-	-	
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage (*)	$I_C = 0.1 \text{ A}$	2N6050 2N6057	60	-	V
			2N6051 2N6058	80	-	
			2N6052 2N6059	100	-	

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MECHANICAL DATA CASE TO-3

DIMENSIONS		
	mm	inches
A	25,51	1,004
B	38,93	1,53
C	30,12	1,18
D	17,25	0,68
E	10,89	0,43
G	11,62	0,46
H	8,54	0,34
L	1,55	0,6
M	19,47	0,77
N	1	0,04
P	4,06	0,16



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector