



2N6053 PNP
2N6055 NPN

COMPLEMENTARY POWER DARLINGTON

The 2N6053 is a silicon epitaxial base PNP transistor in monolithic Darlington configuration and are mounted in Jedec TO-3 metal case. They are intended for use in power linear and switching applications.

The complementary NPN type is the 2N6055

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CEO}	#Collector-Emitter Voltage	$I_B=0$	2N6053 2N6055 60	V
V_{CBO}	Collector-Base Voltage	$I_E=0$	2N6053 2N6055 60	V
V_{EBO}	Emitter-Base Voltage		2N6053 2N6055 5.0	V
I_C	Collector Current	Continuous	2N6053 2N6055 8.0	A
		Peak	2N6053 2N6055 16	
I_B	Base Current		2N6053 2N6055 120	mA
P_{TOT}	Total Dissipation	@ $T_C = 25^\circ$	2N6053 2N6055 100	Watts
T_J	Junction Temperature		2N6053 2N6055 200	$^\circ C$
T_S	Storage Temperature		2N6053 2N6055 -65 to +200	$^\circ C$

THERMAL CHARACTERISTICS

Symbol	Ratings		Value	Unit
R_{thJC}	Thermal Resistance, Junction to Case		2N6053 2N6055 1.75	$^\circ C/W$

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

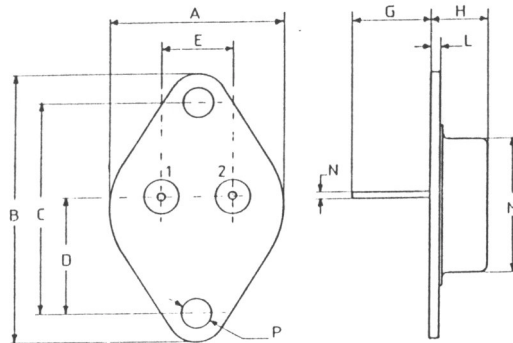
Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit	
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage (1)	$I_C=100\text{ mA}$	2N6053 2N6055	60	-	-	V
I_{CEO}	Collector-Emitter Current	$V_{CE}=30\text{ V}$	2N6053 2N6055	-	-	0.5	mA
I_{CEX}	Collector-Cutoff Current	$V_{CE}=60\text{ V}, V_{BE}=-1.5\text{ V}$	2N6053 2N6055	-	-	500	μA
		$V_{CE}=60\text{ V}, V_{BE}=-1.5\text{ V}$ $T_C=150^\circ\text{C}$	2N6053 2N6055	-	-	5	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5.0\text{ V}$	2N6053 2N6055	-	-	2.0	mA
h_{FE}	DC Current Gain (*)	$I_C=4.0\text{ A}, V_{CE}=3.0\text{ V}$	2N6053 2N6055	750	-	18K	-
		$I_C=8.0\text{ A}, V_{CE}=3.0\text{ V}$		100	-	-	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C=4.0\text{ A}, I_B=16\text{ mA}$	2N6053 2N6055	-	-	2.0	V
		$I_C=8.0\text{ A}, I_B=80\text{ mA}$		-	-	3.0	
$V_{BE(SAT)}$	Base-Emitter Voltage (*)	$I_C=8.0\text{ A}, I_B=80\text{ mA}$	2N6053 2N6055	-	-	4.0	V
$V_{BE(on)}$	Base-Emitter Voltage	$I_C=4.0\text{ A}, V_{CE}=3.0\text{ V}$	2N6053 2N6055	-	-	2.8	V
f_T	Transition Frequency	$V_{CE}=3.0\text{ Vdc}, I_C=3.0\text{ Adc}, f=1\text{ MHz}$	2N6053 2N6055	4	-	-	MHz
C_{cbo}	Collector-base Capacitance	$V_{CB}=10\text{ V}, I_E=0, f=1\text{ MHz}$	2N6053	-	-	300	pF
			2N6055	-	-	200	

(*) Pulse Width $\approx 300\ \mu\text{s}$, Duty Cycle $\angle 2.0\%$
For PNP types, values are negative

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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

*Information furnished is believed to be accurate and reliable. However, CS assumes no responsibility for the consequences of use of such information nor for errors that could appear.
 Data are subject to change without notice.*