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2N6053/2N6055

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	A
		Peak	2N6053 2N6055	16	
I_B	Base Current		2N6053 2N6055	120	mA
P_{TOT}	Total Dissipation	@ T_C = 25°	2N6053 2N6055	100	Watts
T_J	Junction Temperature		2N6053 2N6055	-65 to +200	°C
T_S	Storage Temperature		2N6053 2N6055		°C

THERMAL CHARACTERISTICS

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

2N6053/2N6055

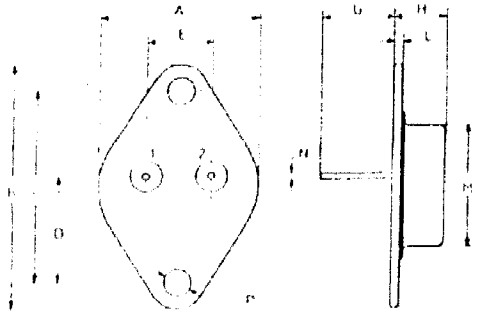
ELECTRICAL CHARACTERISTICS

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

(*) Pulse Width ≈ 300 µs, Duty Cycle ∠ 2.0%

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