

## PNP 2N6053

### POWER COMPLEMENTARY SILICON TRANSISTORS

The 2N6053 are silicon epitaxial-base 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 2N6055.

Compliance to RoHS.

#### ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings			Value	Unit
$V_{CBO}$	Collector-Base Voltage	$I_E=0$	2N6053	-60	V
$V_{CEO}$	Collector-Emitter Voltage	$I_B=0$	2N6053	-60	V
$V_{EBO}$	Emitter-Base Voltage	$I_C=0$		-5.0	V
$I_C$	Collector Current			-8	A
$I_{CM}$	Collector Peak Current			-16	A
$I_B$	Base Current			-120	mA
$P_T$	Power Dissipation	@ $T_C < 25^\circ$		100	W
$T_J$	Junction			200	°C
$T_S$	Storage Temperature			-65 to +200	

#### THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{thJ-C}$	Thermal Resistance, Junction to Case	1.17	°C/W

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### ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

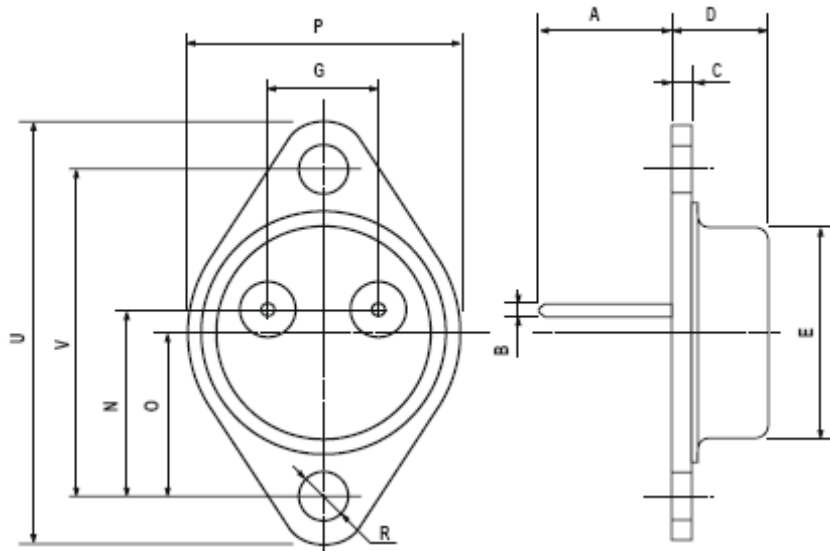
Symbol	Ratings	Test Condition(s)	Min	Typ	MAx	Unit	
$I_{CEX}$	Collector Cutoff Current	$V_{CE} = V_{CEX} = -60 \text{ V}, V_{BE} = 1.5 \text{ V}$	2N6053	-	-	-500	$\mu\text{A}$
		$V_{CE} = V_{CEX} = -60 \text{ V}, V_{BE} = 1.5 \text{ V}$ $T_C = 150^\circ\text{C}$	2N6053	-	-	-5	mA
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = -30 \text{ Vdc}, I_B = 0$	2N6053	-	-	-0.5	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5 \text{ V}$	2N6053	-	-	-2.0	mA
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage (*)	$I_C = -0.1 \text{ A}$	2N6053	-60	-	-	V
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C = -4 \text{ A}, I_B = -16 \text{ mA}$	2N6053	-	-	-2.0	V
		$I_C = -8 \text{ A}, I_B = -80 \text{ mA}$	2N6053	-	-	-3.0	
$V_{BE(SAT)}$	Base-Emitter Saturation Voltage (*)	$I_C = -8 \text{ A}, I_B = -80 \text{ mA}$	2N6053	-	-	-4	V
$V_{BE(ON)}$	Base-Emitter Voltage (*)	$I_C = -4 \text{ A}, V_{CE} = -3 \text{ V}$	2N6053	-	-	-2.8	V
$f_T$	Transition Frequency	$I_C = -3 \text{ A}, V_{CE} = -3 \text{ V}, f = 1 \text{ MHz}$	2N6053	4	-	-	MHz
$h_{FE}$	DC Current Gain (*)	$V_{CE} = -3 \text{ V}, I_C = -4 \text{ A}$	2N6053	750	-	18000	-
		$V_{CE} = -3.0 \text{ V}, I_C = -8 \text{ A}$	2N6053	100	-	-	-

(\*) Pulse Width  $\approx 300 \mu\text{s}$ , Duty Cycle  $\angle 2.0\%$

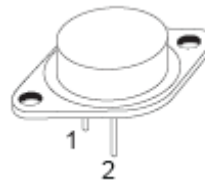
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## MECHANICAL DATA CASE TO-3

DIMENSIONS (mm)		
	min	max
A	11	13.10
B	0.97	1.15
C	1.5	1.65
D	8.32	8.92
F	19	20
G	10.70	11.1
N	16.50	17.20
P	25	26
R	4	4.09
U	38.50	39.30
V	30	30.30



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector



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