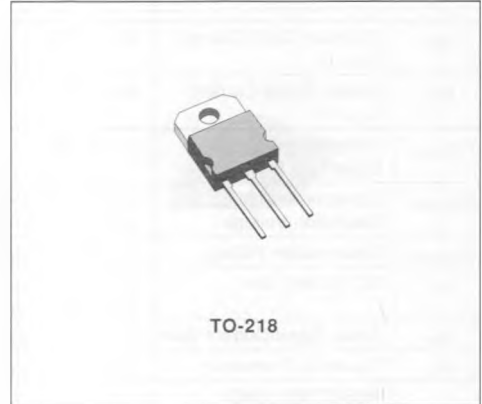


COMPLEMENTARY TRANSISTORS

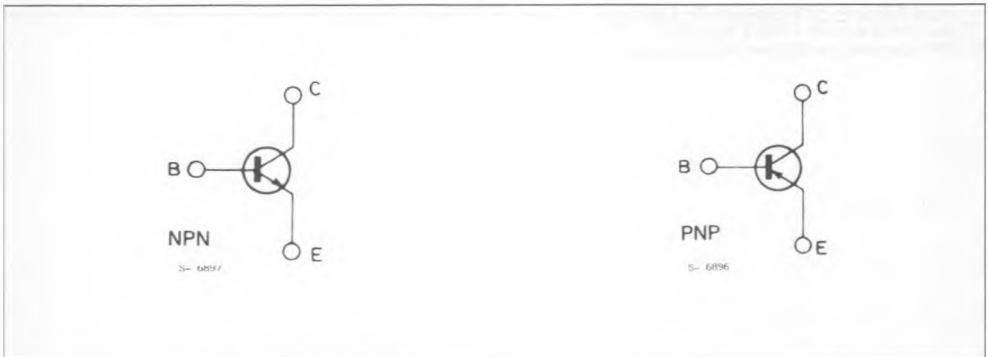
PRELIMINARY DATA

DESCRIPTION

The TIP3055 is a silicon epitaxial base NPN transistor mounted in TO-218 plastic package and intended for power switching circuits, series and shunt regulators, output stages and high fidelity amplifiers. The complementary PNP type is the TIP2955.



INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-base Voltage ($I_E = 0$)	100	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	60	V
I_C	Collector Current	15	A
I_B	Base Current	7	A
P_{tot}	Total Dissipation at $T_c < 25^\circ\text{C}$	90	W
T_{stg}	Storage Temperature	- 65 to 150	$^\circ\text{C}$
T_J	Max. Operating Junction Temperature	150	$^\circ\text{C}$

For PNP type voltage and current values are negative.

THERMAL DATA

$R_{th(j-case)}$	Thermal Resistance Junction-case	max	1.4	$^{\circ}\text{C/W}$
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEX}	Collector Cutoff Current	$V_{CE} = 100\text{V}$ $V_{BE} = -1.5\text{V}$			5	mA
I_{CEO}	Collector Cutoff Current ($I_B = 0$)	$V_{CE} = 30\text{V}$			0.7	mA
I_{EBO}	Emitter Cutoff Current ($I_C = 0$)	$V_{EB} = 7\text{V}$			5	mA
$V_{CE0(sus)}^*$	Collector-emitter Sustaining Voltage	$I_C = 30\text{mA}$	60			V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = 4\text{A}$ $I_B = 0.4\text{A}$ $I_C = 10\text{A}$ $I_B = 3.3\text{A}$			1.1 3	V V
$V_{BE(on)}^*$	Base-emitter Voltage	$I_C = 4\text{A}$ $V_{CE} = 4\text{V}$			1.8	V
h_{FE}^*	DC Current Gain	$I_C = 4\text{A}$ $V_{CE} = 4\text{V}$ $I_C = 10\text{A}$ $V_{CE} = 4\text{V}$	20 5			
h_{fe}	Small Signal Current Gain	$I_C = 1\text{A}$ $V_{CE} = 10\text{V}$ $f = 1\text{KHz}$	15			
f_T	Transition Frequency	$I_C = 0.5\text{A}$ $V_{CE} = 10\text{V}$ $f = 1\text{MHz}$	3			MHz
t_{on} t_{off}	RESISTIVE LOAD Turn-on Time Turn-off Time	$I_C = 6\text{A}$ $I_{B1} = 0.6\text{A}$ $I_{B2} = -0.6\text{A}$ $V_{BEoff} = -4\text{V}$ $R_L = 5\Omega$		0.5 0.9		μs μs

* Pulsed : pulse duration = 300 μs , duty cycle = 1.5%.
For PNP type voltage and current value are negative.