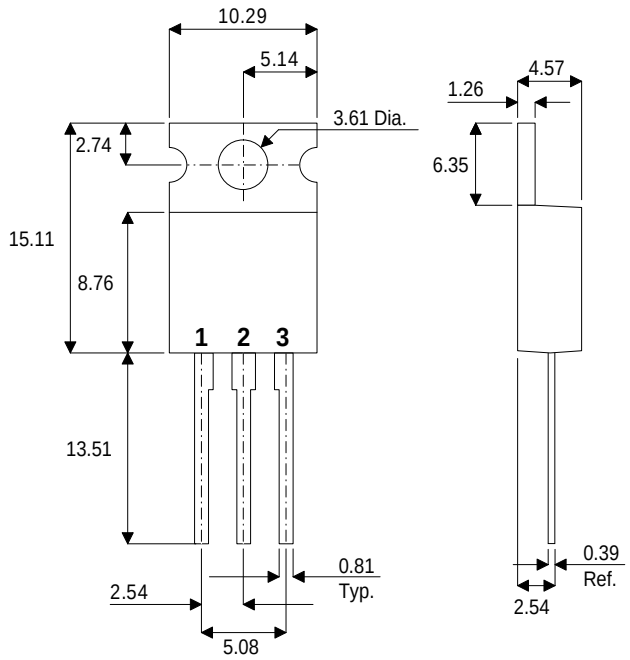
2N6107
2N6292

MECHANICAL DATA
Dimensions in mm



TO220

Pin 1 – Base Pin 2 – Collector Pin 3 – Emitter

HIGH SPEED MEDIUM POWER COMPLEMENTARY PAIR TRANSISTORS

FEATURES

- Silicon Planar Epitaxial Base Transistors
- Medium Power Switching
- Linear Applications

PNP **2N6107**
NPN **2N6292**

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

		PNP 2N6107 NPN 2N6292
V_{CBO}	Collector – Base Voltage (I_E = 0)	80V
V_{CEX}	Collector – Emitter Voltage (R_{BE} = 100Ω)	80V
V_{CEX}	Collector – Emitter Voltage (I_B = 0)	70V
V_{EBO}	Emitter – Base Voltage (I_C = 0)	5V
I_C	Continuous Collector Current	7A
I_B	Base Current	3A
P_{tot}	Total Dissipation at T_{case} = 25°C	40W
T_{stg}	Operating and Storage Temperature Range	–65 to 150°C
T_J	Junction Temperature	150°C

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ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I_{CEX}	Collector – Cut–Off Current	V_{CE} = 80V				0.1	mA
	(V_{BE} = – 1.5V)	V_{CE} = 80V	T_C = 150°C			2	
I_{CEO}	Collector – Cut–Off Current	V_{CE} = 60V	I_B = 0			1	
I_{EBO}	Emitter Cut–Off Current	V_{EB} = 5V	I_C = 0		1		
$V_{CEO(sus)}$*	Collector – Emitter Sustaining Voltage	I_C = 0.1A		70			V
$V_{CER(sus)}$*	Collector – Emitter Sustaining Voltage	I_C = 0.1A	R_{BE} = 100Ω	80			
$V_{CE(sat)}$*	Collector – Emitter Saturation Voltage	I_C = 3A	I_B = 0.3A			1	
		I_C = 7A	I_B = 3A			3.5	
$V_{BE(on)}$*	Base – Emitter Voltage	I_C = 3A	V_{CE} = 4A			1.5	
		I_C = 7A	I_B = 3A			3	
h_{FE}*	DC Current Gain	I_C = 3A	V_{CE} = 4A	30		150	—
		I_C = 7A	V_{CE} = 4A	2.3			
h_{fe}	Small Signal Current Gain	I_C = 0.5A f = 50KHz	V_{CE} = 4A	20			
f_t	Transition Frequency	I_C = 0.5A	V_{CE} = 4V **NPN**	10			MHz
		I_C = 0.5A	V_{CE} = 4V **PNP**	4			
C_{cbo}	Collector – Base Capacitance	V_{CB} = 10V	f = 1MHz			250	pF

* Pulse test t_p = 300μs , δ =1.5%

For PNP types Voltage and Current Values are Negative.

THERMAL DATA

	Parameter	Min.	Typ.	Max.	Unit
$R_{th\text{-}j\text{-}case}$	Thermal resistance Junction-Case			3.12	°C/W
$R_{th\text{-}j\text{-}amb}$	Thermal resistance Junction-ambient			70	°C/W