

COMPLEMENTARY SILICON POWER TRANSISTORS

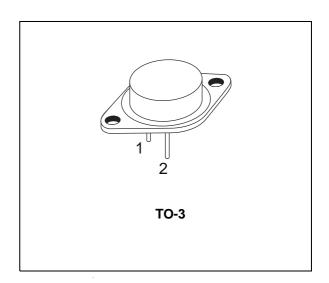
- STMicroelectronics PREFERRED SALESTYPES
- COMPLEMENTARY NPN-PNP DEVICES

DESCRIPTION

The 2N3055 is a silicon Epitaxial-Base Planar NPN transistor mounted in Jedec TO-3 metal case

It is intended for power switching circuits, series and shunt regulators, output stages and high fidelity amplifiers.

The complementary PNP type is MJ2955.



INTERNAL SCHEMATIC DIAGRAM Co (TAB) Bo (1) Bo (2) SCO8820 Co (TAB) Co (TAB) Co (TAB) Co (TAB)

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit	
		NPN	2N3055	
		PNP	MJ2955	
V _{CBO}	Collector-Base Voltage (I _E = 0)	100	V	
V _{CER}	Collector-Emitter Voltage (R _{BE} ≤ 100Ω)		70	V
V _{CEO}	Collector-Emitter Voltage (I _B = 0)		60	V
V _{EBO}	Emitter-Base Voltage (I _C = 0)		7	V
Ic	Collector Current		15	А
Ι _Β	Base Current		7	А
P _{tot}	Total Dissipation at T _c ≤ 25 °C		115	W
T _{stg}	Storage Temperature		-65 to 200	°C
T _i	Max. Operating Junction Temperature		200	°C

For PNP types voltage and current values are negative.

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THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-case	Max	1.5	°C/W
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25$ $^{\circ}C$ unless otherwise specified)

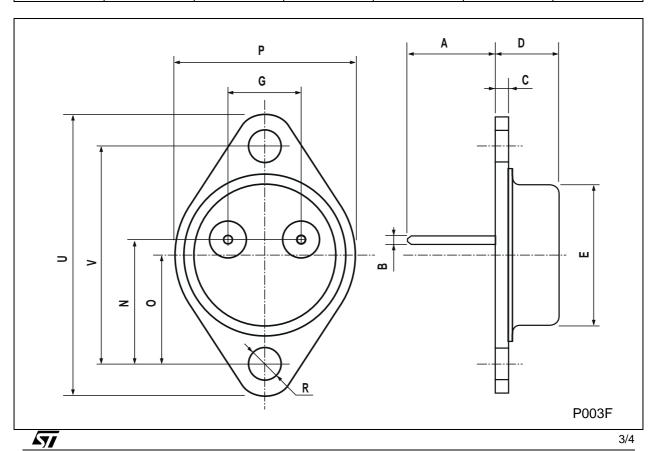
Symbol	Parameter	Test Conditions	Min.	Тур.	Max.	Unit
I _{CEX}	Collector Cut-off Current (V _{BE} = -1.5V)	V _{CE} = 100 V V _{CE} = 100 V T _j = 150 °C			1 5	mA mA
I _{CEO}	Collector Cut-off Current (I _B = 0)	V _{CE} = 30 V			0.7	mA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	$V_{EB} = 7 \text{ V}$			5	mA
V _{CEO(sus)*}	Collector-Emitter Sustaining Voltage (I _B = 0)	I _C = 200 mA	60			V
VCER(sus)*	Collector-Emitter Sustaining Voltage ($R_{BE} = 100 \Omega$)	I _C = 200 mA	70			٧
V _{CE(sat)*}	Collector-Emitter Saturation Voltage	$I_{C} = 4 \text{ A}$ $I_{B} = 400 \text{ mA}$ $I_{C} = 10 \text{ A}$ $I_{B} = 3.3 \text{ A}$			1 3	V V
V _{BE} *	Base-Emitter Voltage	I _C = 4 A			1.8	V
h _{FE} *	DC Current Gain	I _C = 4 A	20 5		70	
f _T	Transition frequency	$I_{C} = 0.5 \text{ A}$ $V_{CE} = 10 \text{ V}$	3			MHz
I _{s/b} *	Second Breakdown Collector Current	V _{CE} = 40 V	2.87			Α

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^{*} Pulsed: Pulse duration = 300 μs, duty cycle 1.5 % For PNP types voltage and current values are negative.

TO-3 MECHANICAL DATA

DIM.	mm			inch			
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
А	11.00		13.10	0.433		0.516	
В	0.97		1.15	0.038		0.045	
С	1.50		1.65	0.059		0.065	
D	8.32		8.92	0.327		0.351	
Е	19.00		20.00	0.748		0.787	
G	10.70		11.10	0.421		0.437	
N	16.50		17.20	0.649		0.677	
Р	25.00		26.00	0.984		1.023	
R	4.00		4.09	0.157		0.161	
U	38.50		39.30	1.515		1.547	
V	30.00		30.30	1.187		1.193	



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