

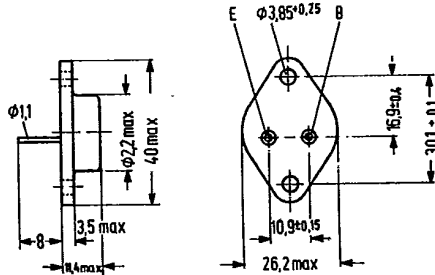
NPN Transistor for Powerful AF Output Stages

2 N 3055

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2 N 3055 is a single diffused NPN silicon transistor in TO 3 case (3 A 2 DIN 41872). The collector is electrically connected to the case. The transistor is particularly suitable for use in powerful AF output stages and in stabilized power supply units. One mica washer and two insulating nipples are provided for the insulated mounting of this transistor on a chassis; they are to be ordered separately.

Type	Ordering code
2 N 3055	Q62702-U58



Approx. weight 18 g

Dimensions in mm

Maximum ratings

Collector-base voltage	V_{CBO}	100	V
Collector-emitter voltage ($V_{BE} = -1.5 \text{ V}; I_C = 10 \text{ mA}$)	V_{CEV}	90	V
Collector-emitter voltage ($R_{BE} = 100 \Omega; I_C = 200 \text{ mA}$)	V_{CER}	70	V
Collector-emitter voltage	V_{CEO}	60	V
Emitter-base voltage	V_{EBO}	7	V
Collector current	I_C	15	A
Base current	I_B	7	A
Junction temperature	T_j	200	°C
Storage temperature range	T_{stg}	-65 to +200	°C
Total power dissipation ($T_{case} = 25 \text{ °C}$)	P_{tot}	115	W

Thermal resistance

Junction to case	R_{thJC}	≤ 1.5	K/W
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Static characteristics ($T_{\text{case}} = 25^\circ\text{C}$)

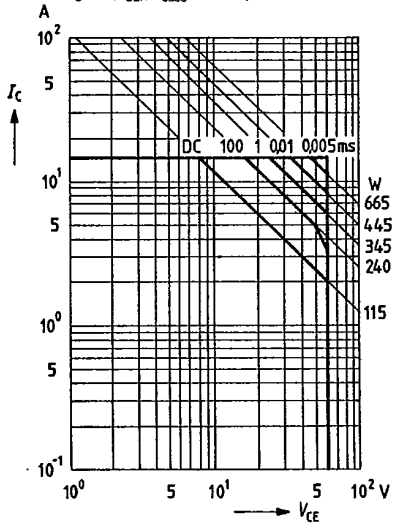
Collector cutoff current ($V_{\text{CE}} = 30\text{ V}$)	I_{CEO}	< 0.7	mA
Collector cutoff current ($V_{\text{CEV}} = 100\text{ V}; V_{\text{BE}} = -1.5\text{ V}$)	I_{CEV}	< 5	mA
Collector cutoff current ($V_{\text{CEV}} = 100\text{ V};$ $V_{\text{BE}} = -1.5\text{ V}; T_{\text{case}} = 150^\circ\text{C}$)	I_{CEV}	< 30	mA
Emitter cutoff current ($V_{\text{EBO}} = 7\text{ V}$)	I_{EBO}	< 5	mA
Collector-emitter breakdown voltage ($I_{\text{C}} = 200\text{ mA}$)	$V_{(\text{BR})\text{CEO}}$	> 60	V
Collector-emitter breakdown voltage ($I_{\text{C}} = 100\text{ mA}; V_{\text{BE}} = -1.5\text{ V}$)	V_{CEV}	> 90	V
Collector-emitter breakdown voltage ($I_{\text{C}} = 200\text{ mA}; R_{\text{BE}} = 100\ \Omega$)	V_{CER}	> 70	V
Base-emitter voltage ($I_{\text{C}} = 4\text{ A}; V_{\text{CE}} = 4\text{ V}$)	V_{BE}	< 1.8	V
Collector-emitter saturation voltage ($I_{\text{C}} = 4\text{ A}; I_{\text{B}} = 0.4\text{ A}$)	V_{CEsat}	< 1.1	V
($I_{\text{C}} = 10\text{ A}; I_{\text{B}} = 3.3\text{ A}$)	V_{CEsat}	< 8	V
DC current gain ($I_{\text{C}} = 4\text{ A}; V_{\text{CE}} = 4\text{ V}$)	h_{FE}	20 to 70	—

Dynamic characteristics ($T_{\text{case}} = 25^\circ\text{C}$)

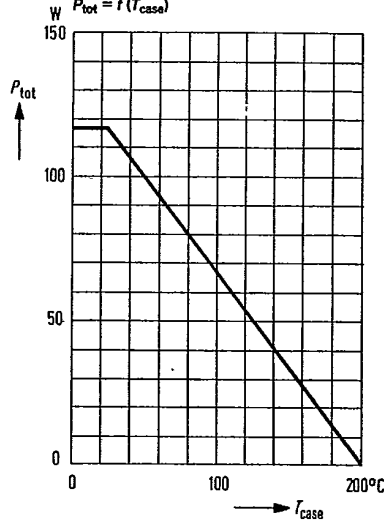
Transition frequency ($I_{\text{C}} = 1\text{ A}$)	f_{T}	> 0.8	MHz
h_{fe} cutoff frequency ($I_{\text{C}} = 1\text{ A}; V_{\text{CE}} = 4\text{ V}$)	f_{hfe}	> 10	kHz

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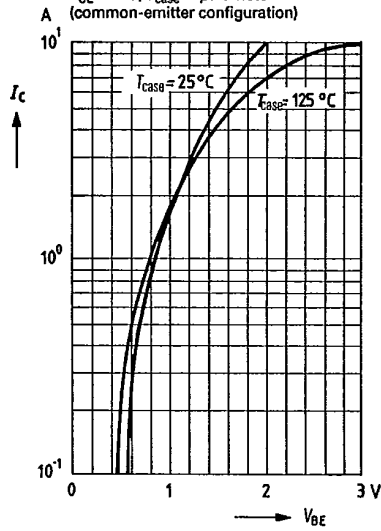
Permissible operating range
 $I_C = f(V_{CE}); T_{case} = 25^\circ\text{C}; v = 0$



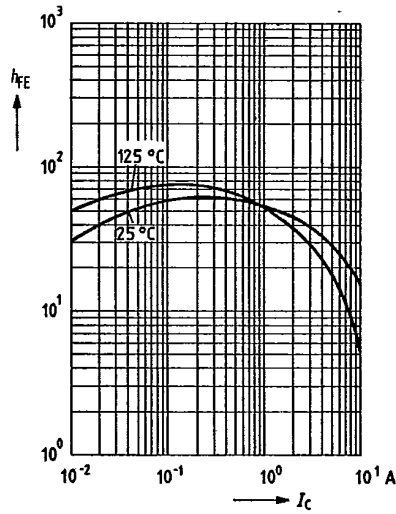
Total perm. power dissipation versus temperature
 $P_{tot} = f(T_{case})$



Collector current $I_C = f(V_{BE})$
 $V_{CE} = 4\text{ V}; T_{case} = \text{parameter}$
 (common-emitter configuration)



DC current gain $h_{FE} = f(I_C)$
 $V_{CE} = 4\text{ V}; T_{case} = \text{parameter}$



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