

FEATURES

- Available as “HR” (high reliability) screened per MIL-PRF-19500, JANTX level. Add “HR” suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding “-PBF” suffix.

MAXIMUM RATINGS

Ratings	Symbol	2N3055A MJ2955A	MJ15015 MJ15016	Unit
Collector-emitter voltage	V_{CEO}	60	120	V
Collector-base voltage	V_{CBO}	100	200	V
Collector-emitter voltage base reversed biased	V_{CEV}	100	200	V
Emitter-base voltage	V_{EBO}	7.0		V
Collector current	I_C	15		A
Base current	I_B	7.0		A
Total power dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_T	115 0.65	180 1.03	W W/ $^\circ\text{C}$
Operating junction and storage temperature range	T_J, T_{stg}	-65 to +200		$^\circ\text{C}$
Maximum thermal resistance, junction-to-case	$R_{\theta JC}$	1.52	0.98	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Characteristics	Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS				
Collector-emitter sustaining voltage ⁽¹⁾ $I_C = 200\text{mA}, I_B = 0$	2N3055A, MJ2955A MJ15015, MJ15016 $V_{(BR)SUS}$	60 120	- -	V
Collector cutoff current $V_{CB} = 30\text{V}, I_B = 0$ $V_{CB} = 60\text{V}, I_B = 0$	2N3055A, MJ2955A MJ15015, MJ15016 I_{CEO}	- -	0.7 0.1	mA
Collector cutoff current $V_{BE(OFF)} = 1.5\text{V}$ $V_{CEV} = \text{Rated value}$	2N3055A, MJ2955A MJ15015, MJ15016 I_{CEV}	- -	5.0 1.0	mA
Collector cutoff current $V_{BE(OFF)} = 1.5\text{V}, T_C = 150^\circ\text{C}$ $V_{CEV} = \text{Rated value}$	2N3055A, MJ2955A MJ15015, MJ15016 I_{CEO}	- -	30 6.0	mA
Emitter cutoff current $V_{EB} = 7\text{V}, I_C = 0$	2N3055A, MJ2955A MJ15015, MJ15016 I_{EBO}	- -	5.0 0.2	mA
ON-CHARACTERISTICS⁽¹⁾				
DC current gain $I_C = 4.0\text{A}, V_{CE} = 2.0\text{V}$ $I_C = 4.0\text{A}, V_{CE} = 4.0\text{V}$ $I_C = 10\text{A}, V_{CE} = 4.0\text{V}$	h_{FE}	10 20 5.0	70 70 -	-
Collector-emitter saturation voltage $I_C = 4.0\text{A}, I_B = 0.4\text{A}$ $I_C = 10\text{A}, I_B = 3.3\text{A}$ $I_C = 15\text{A}, I_B = 7.0\text{A}$	$V_{CE(sat)}$	- - -	1.1 3.0 5.0	V

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

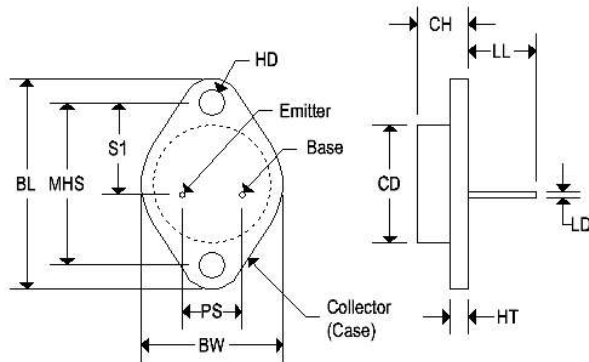
Characteristics	Symbol	Min.	Max.	Unit
Base-emitter voltage $I_C = 4.0\text{A}, V_{CE} = 4.0\text{V}$	$V_{BE(ON)}$	0.7	1.8	V
DYNAMIC CHARACTERISTICS				
Current gain – bandwidth product ⁽²⁾ $I_C = 1.0\text{A}, V_{CE} = 4.0\text{V}, f = 1.0\text{ MHz}$	f_T	0.8 2.2	6.0 18	MHz
	2N3055A, MJ2955A MJ15015, MJ15016			

Note 1: Pulse test: pulse width = 300 μs , duty cycle $\leq 2.0\%$.

Note 2: $|h_{fe}| \cdot f_{test}$

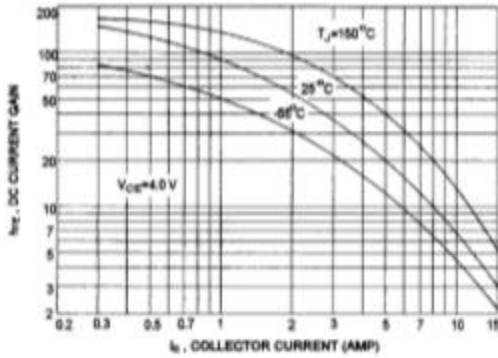
MECHANICAL CHARACTERISTICS

Case	TO-3
Marking	Alpha-numeric
Polarity	See below

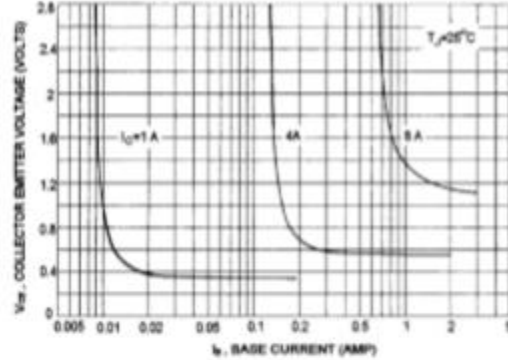


	TO-3			
	Inches		Millimeters	
	Min	Max	Min	Max
CD	-	0.875	-	22.220
CH	0.250	0.335	6.350	8.510
HT	0.055	0.135	1.400	3.430
BW	-	1.050	-	26.670
HD	0.131	0.188	3.330	4.780
LD	0.038	0.043	0.970	1.090
LL	0.312	0.500	7.920	12.700
BL	1.550 REF		39.370 REF	
MHS	1.177	1.197	29.900	30.400
PS	0.420	0.440	10.670	11.180
S1	0.655	0.675	16.640	17.150

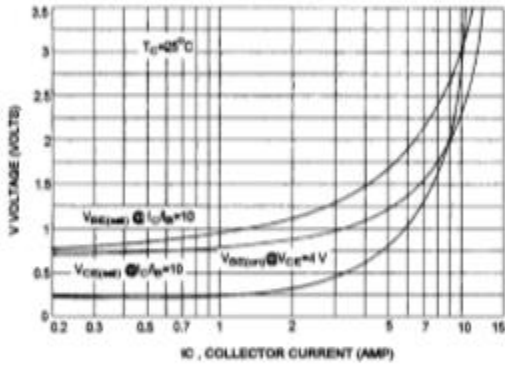
DC CURRENT GAIN



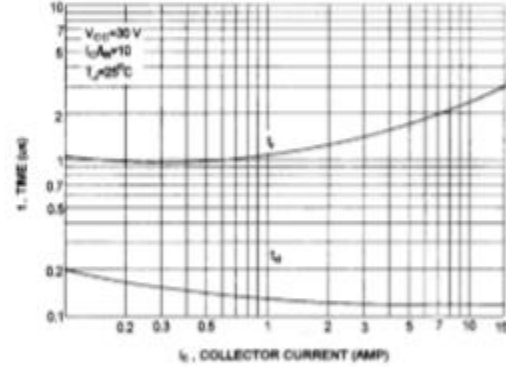
COLLECTOR SATURATION REGION



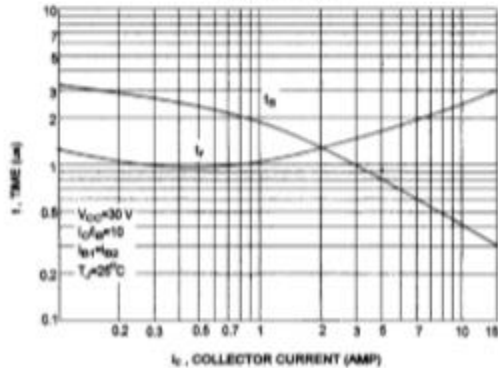
"ON" VOLTAGES



TURN-ON TIME



TURN-OFF TIME



CURRENT GAIN-BANDWIDTH PRODUCT

