



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-251/TO-252 Plastic-Encapsulate Transistors

MJD3055 TRANSISTOR (NPN)

FEATURES

- Designed for general purpose amplifier and low speed switching applications .
- Electrically similar to MJE3055.
- DC current gain specified to 10 Amperes

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	70	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	10	A
P_C	Collector Power Dissipation	1.25	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$

TO-251
TO-252-2L



1.BASE

2.COLLECTOR

3.EMITTER



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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}, I_E=0$	70			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=200\text{ mA}, I_B=0$	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\text{mA}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=70\text{V}, I_E=0$			0.02	mA
	I_{CEO}	$V_{CB}=30\text{V}, I_B=0$			50	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			0.5	mA
DC current gain	$h_{FE(1)}$	$V_{CE}=4\text{V}, I_C=4\text{A}$	20		100	
	$h_{FE(2)}$	$V_{CE}=4\text{V}, I_C=10\text{A}$	5			
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$	$I_C=4\text{A}, I_B=0.4\text{A}$			1.1	V
	$V_{CE(sat)(2)}$	$I_C=10\text{A}, I_B=3.3\text{A}$			8	V
Base-emitter voltage	V_{BE}	$V_{CE}=4\text{V}, I_C=4\text{A}$			1.8	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=0.5\text{A}, f=500\text{KHz}$	2			MHz

Typical Characteristics

MJD3055

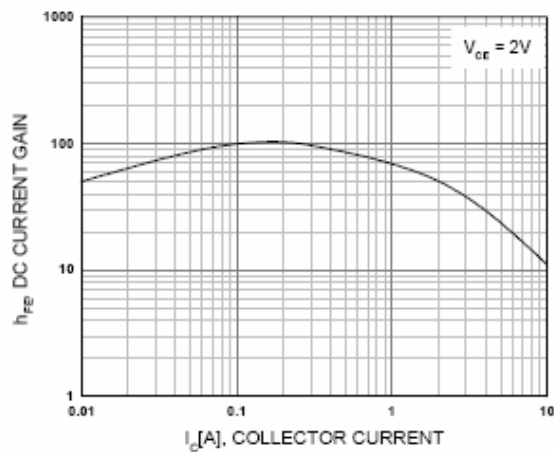


Figure 1. DC current Gain

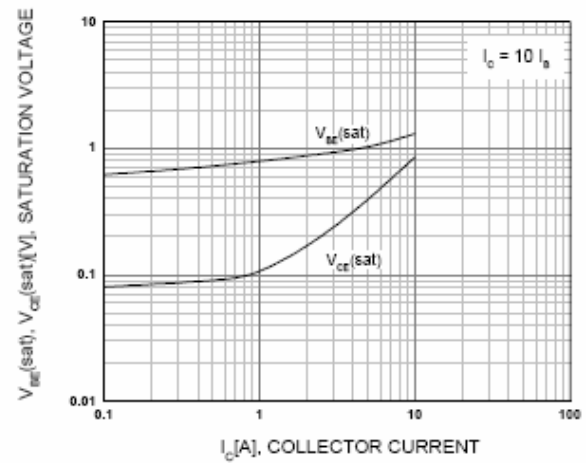


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

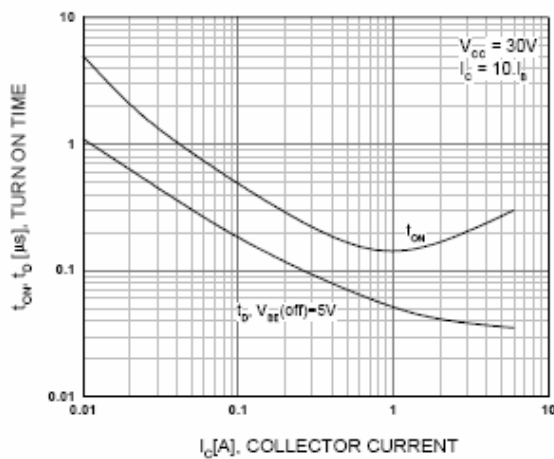


Figure 3. Turn On Time

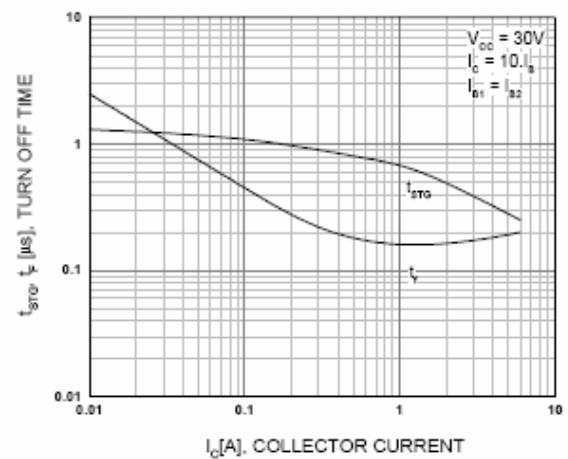


Figure 4. Turn Off Time

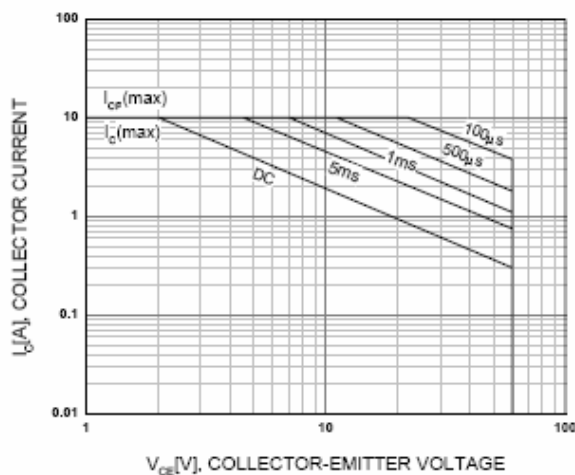


Figure 5. Safe Operating Area

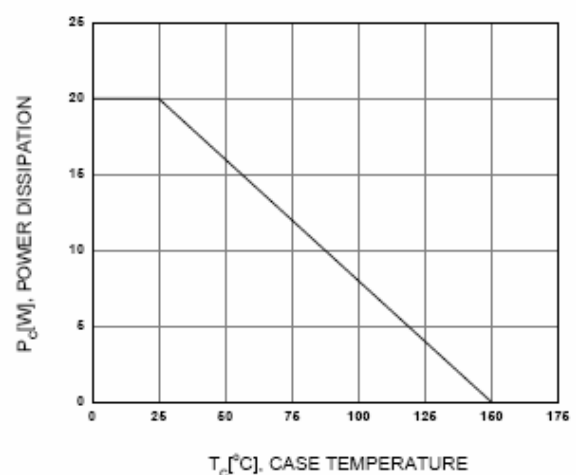


Figure 6. Power Derating