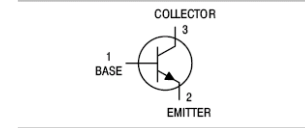


### Features

- Low collector-emitter saturation voltage
- Fast switching speeds
- Complement to MJD45H11

HF



TO-252

### Mechanical Data

- Case: TO-252
- Molding compound: UL flammability classification rating 94V-0
- Terminal s: Tin-plated; solderability per MIL-STD-202, Method 208

### Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
MJD44H11	TO-252	80pcs / Tube or 2500pcs / Tape & Reel	MJD44H11

### Maximum Ratings (@ T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Emitter Breakdown Voltage	V <sub>CEO</sub>	80	V
Emitter-Base Breakdown Voltage	V <sub>EBO</sub>	5	V
Collector Current (Continuous)	I <sub>C</sub>	8	A
Collector Current (Pulse)	I <sub>CM</sub>	16	A

### Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation (T <sub>C</sub> = 25°C)	P <sub>D</sub>	20	W
Thermal Resistance (Junction-to-Air)	R <sub>θJA</sub>	71.4	°C/W
Thermal Resistance (Junction-to-Case)	R <sub>θJC</sub>	6.25	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ +150	°C

**Electrical Characteristics** (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	$I_C = 30\text{mA}, I_B = 0$	80	-	-	V
Collector Cut-off Current	$I_{CES}$	$V_{CE} = \text{Rated } V_{CEO}, V_{BE} = 0$	-	-	10	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_C = 0$	-	-	50	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = 1\text{V}, I_C = 2\text{A}$	60	-	-	-
		$V_{CE} = 1\text{V}, I_C = 4\text{A}$	40	-	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 8\text{A}, I_B = 0.4\text{A}$	-	-	1	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 8\text{A}, I_B = 0.8\text{A}$	-	-	1.5	V
Output Capacity	$C_{ob}$	$V_{CB} = 10\text{V}, f = 1\text{MHz}$	-	130	-	pF
Current-Gain—Bandwidth Product	$f_T$	$I_C = 0.5\text{A}, V_{CE} = 10\text{V}$ $f = 20\text{MHz}$	-	50		MHz

Ratings and Characteristic Curves (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)

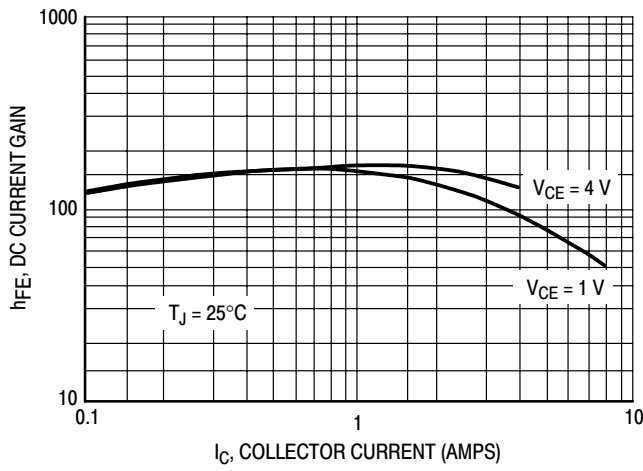


Figure 1 DC Current Gain

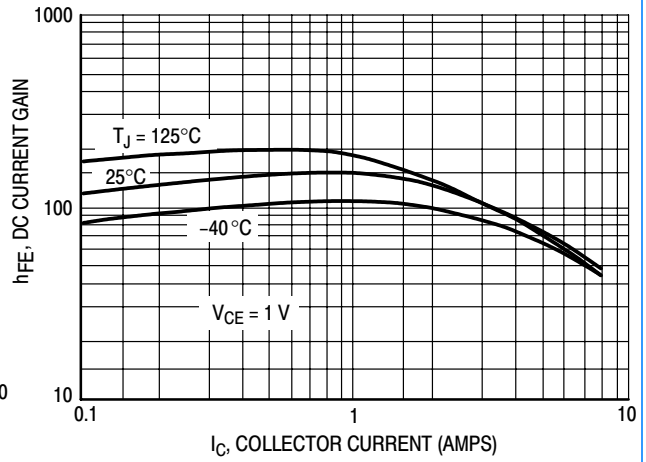


Figure 2 Current Gain versus Temperature

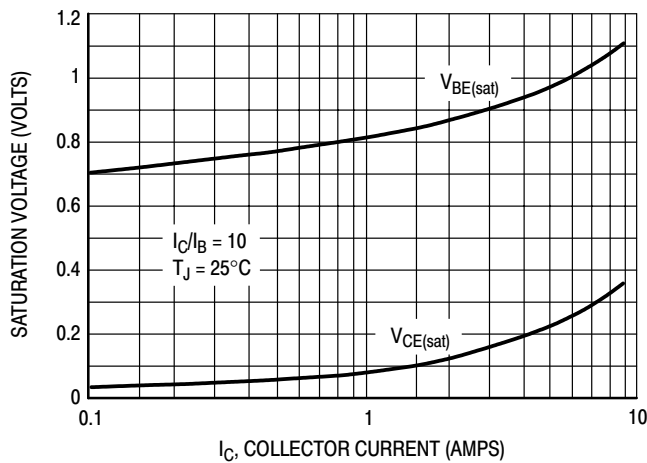
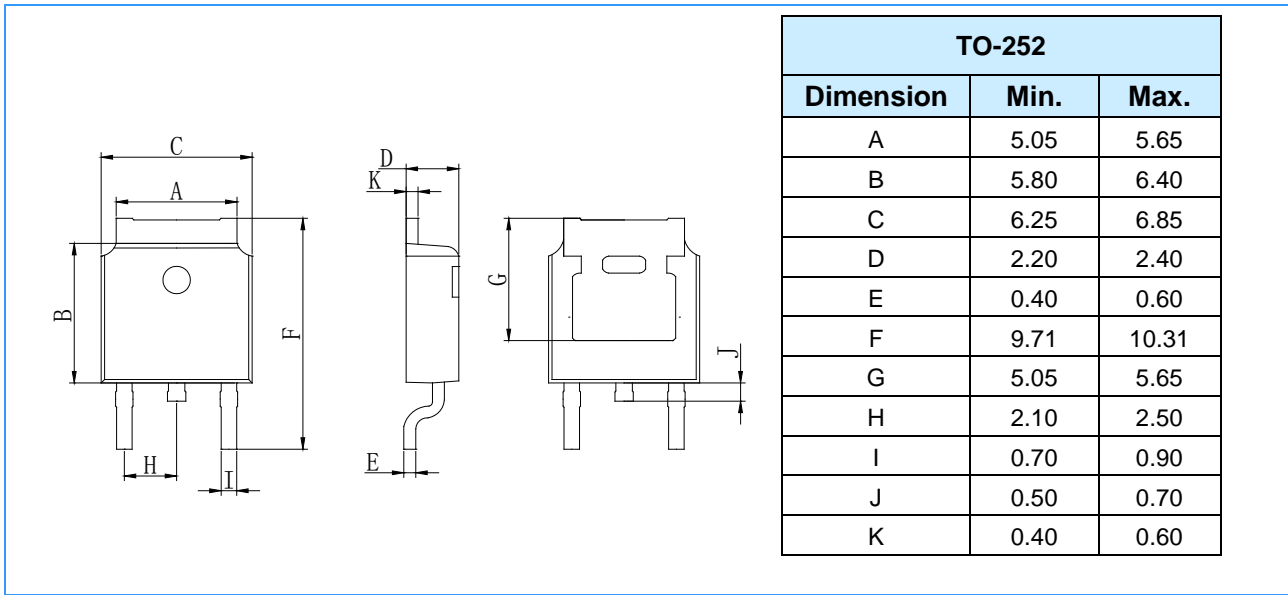
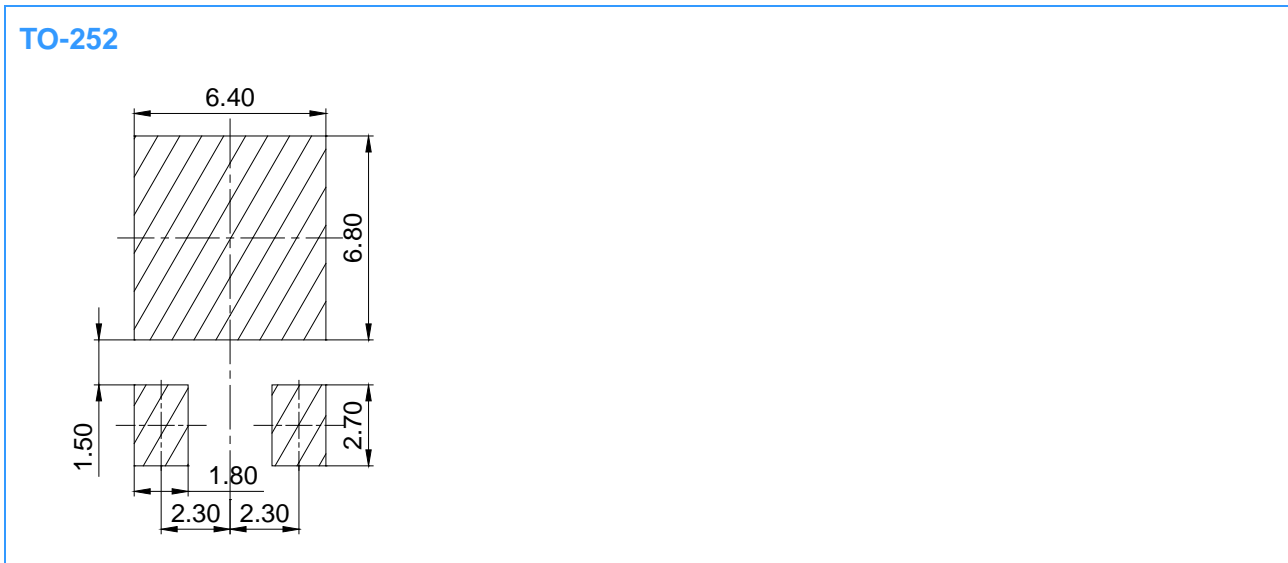


Figure 3 On-Voltages

### Package Outline Dimensions (Unit: mm)



### Mounting Pad Layout (Unit: mm)



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