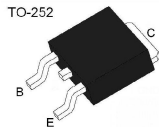


Applications

- Power amplifier
- Switching circuits

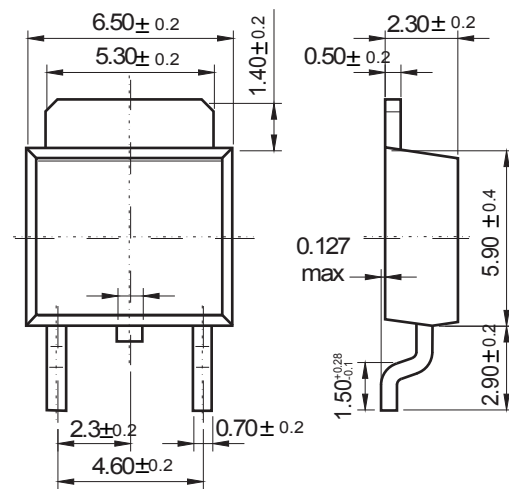
Features

- Low collector-emitter saturation voltage
- Fast switching speed
- The complementary are MJD45H11



TO-252

Unit: mm



Dimensions in inches and (millimeters)

Absolute Maximum Rating ($T_C=25^\circ\text{C}$ unless otherwise noted)

Parameter		Symbol	Value	Unit
Collector-base voltage		BV_{CBO}	100	V
Collector-emitter voltage		BV_{CEO}	80	V
Emitter-base voltage		BV_{EBO}	5	V
Collector current (DC)		I_C	8	A
Collector current Pulse		I_{CP}	16	A
Collector power dissipation	$T_a=25^\circ\text{C}$	P_C	1.75	W
	$T_C=25^\circ\text{C}$		20	
Junction temperature		T_j	150	$^\circ\text{C}$
Storage temperature		T_{stg}	-65~150	$^\circ\text{C}$

MJD44H11 NPN

Electrical Characteristics (T_C=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV _{CBO}	I _C = 100μA, I _E = 0	100			V
Collector-emitter breakdown voltage	BV _{CEO}	I _C = 10mA, I _B = 0	80			V
Emitter-base breakdown voltage	BV _{EBO}	I _E = 100μA, I _C = 0	5			V
Collector cut-off current	I _{CBO}	V _{CB} = 80V, V _{BE} = 0			10	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 5V, I _C = 0			50	μA
DC current gain *	h _{FE}	V _{CE} = 1V, I _C = 2A V _{CE} = 1V, I _C = 4A	60 40			
Collector-emitter saturation voltage*	V _{CE(sat)}	I _C = 8A, I _B = 0.4A			1	V
Base-emitter saturation voltage*	V _{BE(sat)}	I _C = 8A, I _B = 0.8A			1.5	V
Transition frequency	f _T	V _{CE} = 10V, I _B = 0.5A		50		MHz
Output Capacitance	C _{ob}	V _{CB} = 10V, I _E = 0, f = 1MHz		130		pF

* Pulse Test: PW ≤ 300μs, Duty Cycle ≤ 2%

RATING AND CHARACTERISTIC CURVES (MJD44H11)

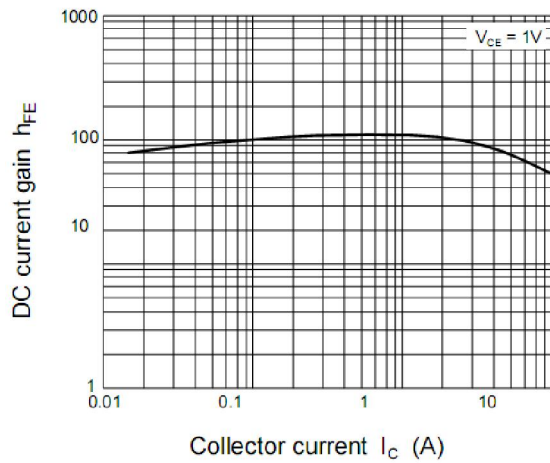


Figure 1. DC current Gain

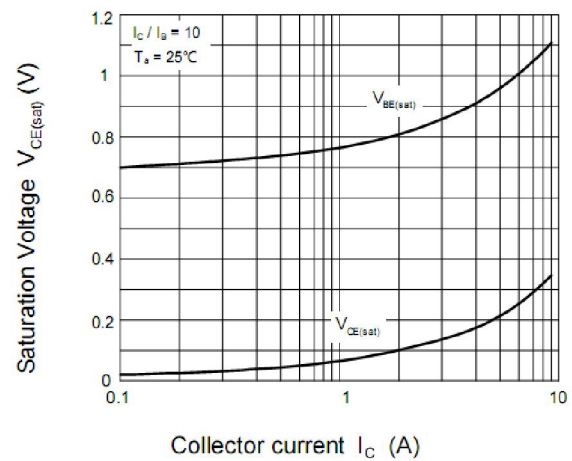


Figure 2 . Saturation Voltage

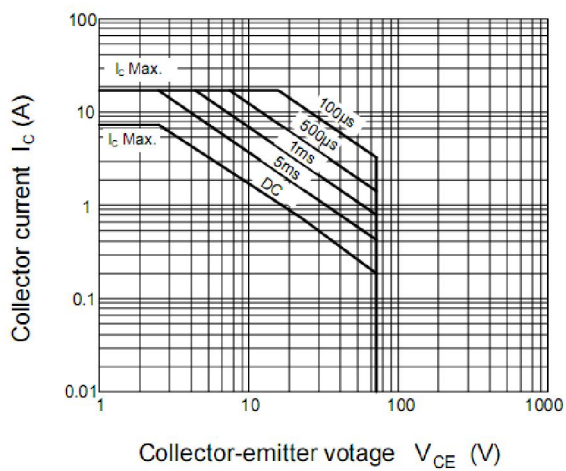


Figure 3. Safe Operating Area

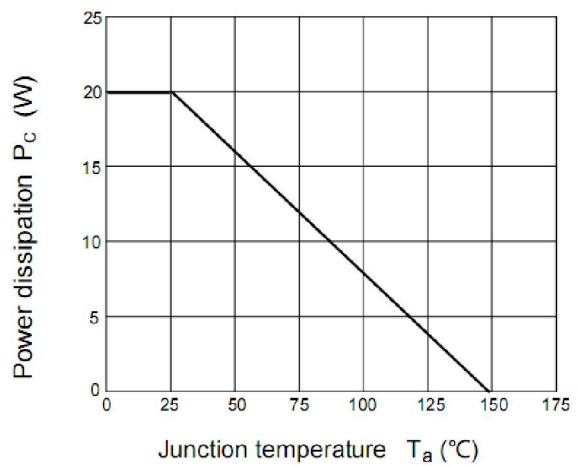


Figure 4. Power Derating