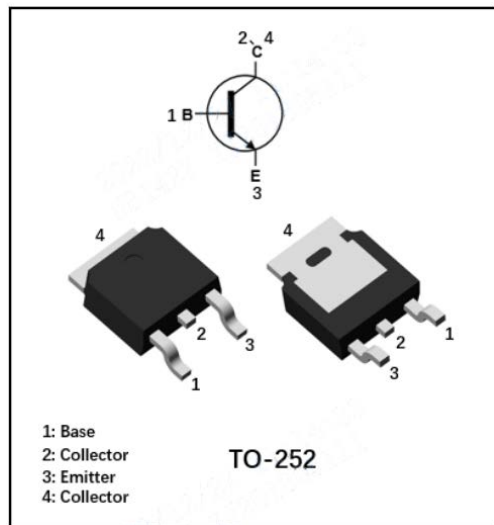


NPN Power Transistor



Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1

Applications

- Designed for general purpose amplifier and low speed switching applications.

Mechanical Data

- Package: TO-252
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Value
Device marking code			MJD44H11
Collector-Base Voltage	V_{CBO}	V	100
Collector-Emitter Voltage	V_{CEO}	V	80
Emitter-Base Voltage	V_{EBO}	V	6
Collector Current -Continuous	I_C	A	8
Total Device Dissipation (*)	P_D	W	1.25
Thermal Resistance, Junction to Ambient Air (*)	R_{thJA}	°C/W	100
Junction Temperature	T_j	°C	-55 to +150
Storage Temperature	T_{STG}	°C	-55 to +150

(*) Device mounted on FR-4 PCB 1.0*1.0*0.06 inch, mounting pad for collector 1 cm²

MJD44H11

■ Electrical Characteristics (Ta=25°C unless otherwise noted)

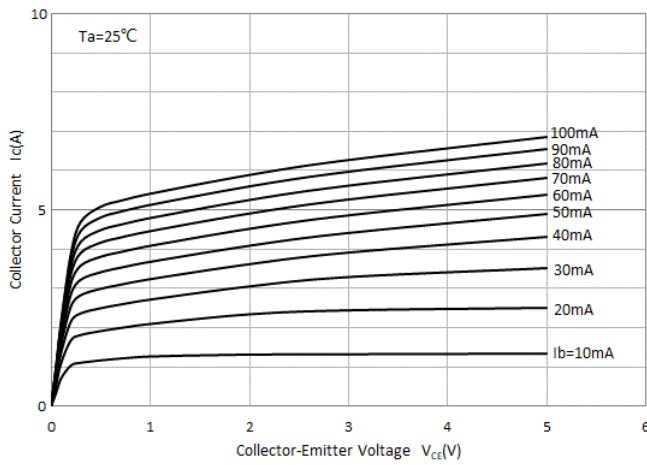
Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V_{CBO}	V	$I_C = 100\mu A, I_E = 0$	100		
Collector-emitter breakdown voltage	V_{CEO}	V	$I_C = 10mA, I_B = 0$	80		
Emitter-base breakdown voltage	V_{EBO}	V	$I_E = 100\mu A, I_C = 0$	6		
Collector-base cut-off current	I_{CES}	μA	$V_{CE} = 80V, V_{EB} = 0$	-	-	10
Emitter-base cut-off current	I_{EBO}	μA	$V_{EB} = 5V, I_C = 0$			1
DC current gain	h_{FE}		$V_{CE} = 1V, I_C = 2A$	60		
			$V_{CE} = 1V, I_C = 4A$	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C = 8A, I_B = 0.4A$			1
Base-emitter saturation voltage	$V_{BE(sat)}$	V	$I_C = 8A, I_B = 0.8A$			1.5

■ Other Characteristics (Ta=25°C unless otherwise noted)

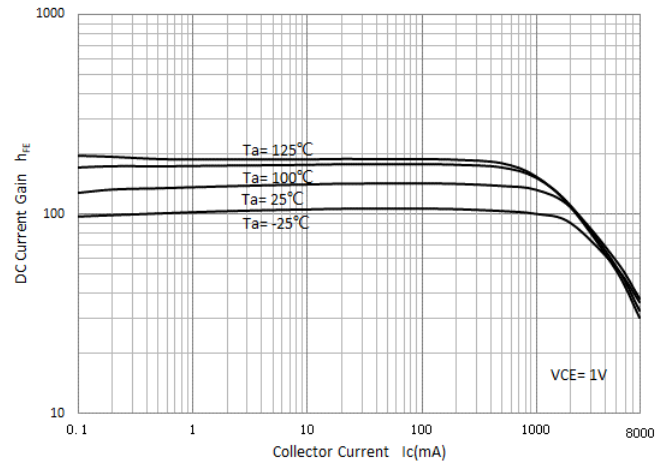
Item	Symbol	Unit	Conditions	Min	Typ	Max
Transition frequency	f_T	MHz	$V_{CE} = 5V, I_C = 1A$	10	-	-

■ Characteristics(Typical)

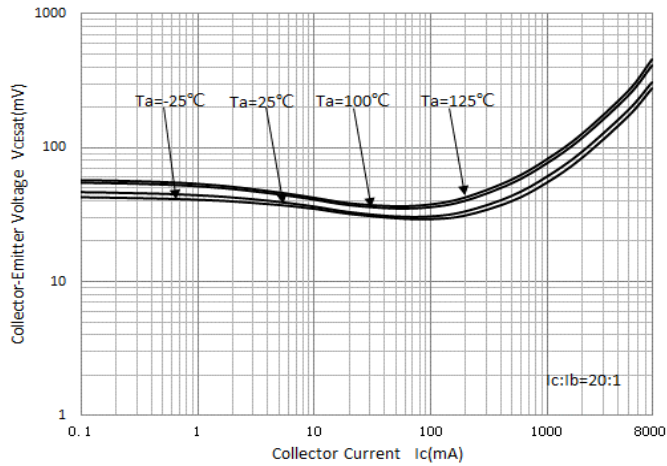
Static Characteristic



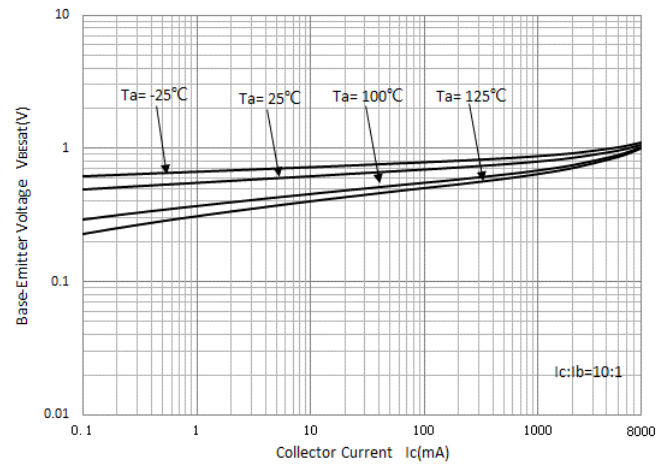
DC Current Gain



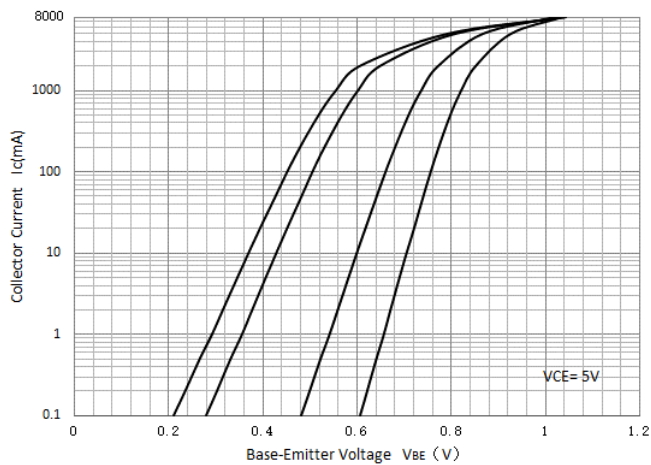
Collector-Emitter Saturation Voltage



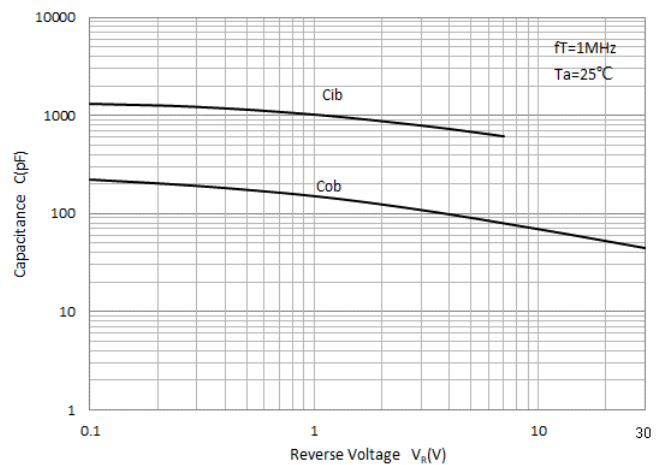
Base-Emitter Saturation Voltage



Base-Emitter On Voltage



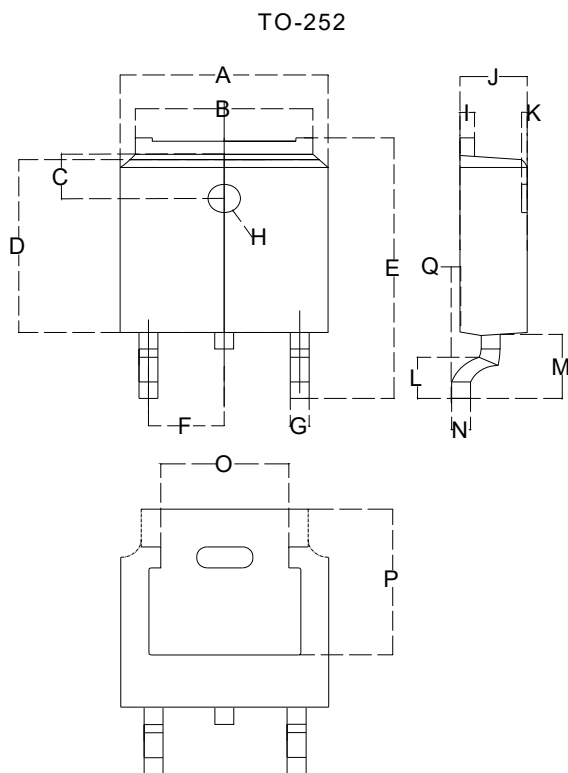
$C_{ob}/C_{ib}-V_{CB}/V_{EB}$



■ **Ordering Information (Example)**

PREFERED P/N	PACKING CODE	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MJD44H11	F1	2500	2500	25000	13"Reel

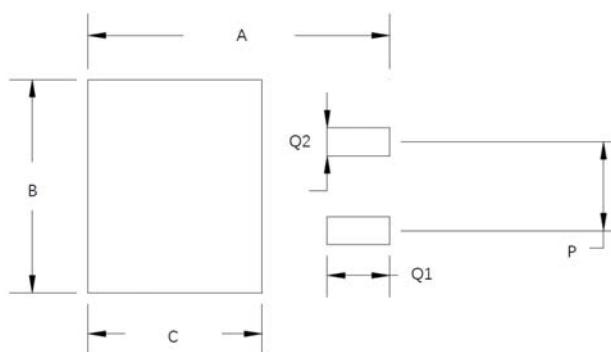
■ **TO-252 Package information**



Dimensions in millimeters

TO-252		
Dim	Min	Max
A	6.500	6.700
B	5.100	5.460
C	1.400	1.800
D	6.000	6.200
E	10.000	10.400
F	2.166	2.366
G	0.660	0.860
H	Φ 1.050	Φ 1.350
I	0.460	0.580
J	2.200	2.400
K	0	0.300
L	0.890	2.290
M	2.730	3.080
N	0.430	0.580
O	4.20	4.95
P	5.15	5.45
Q	0	0.2

■ **Suggested Pad Layout**



Dim	Millimeters
A	11.4
B	6.74
C	6.23
P	4.56
Q1	2.28
Q2	1.52

Disclaimer

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