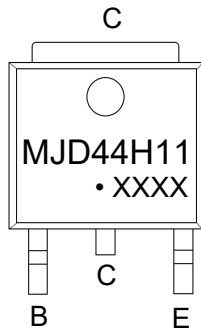


Features

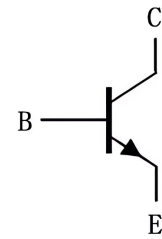
- Designed for General Purpose Amplifier and Low Speed Switching Applications
- DPAK for Surface-Mount Applications
- Low Collector Emitter Saturation Voltage
- High Current



Marking and pin assignment



TO-252-2L top view



Schematic diagram



Pb-Free



Halogen-Free

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	6.0	V
I_C	Collector Current	8.0	A
$I_{CP}^{①}$	Collector Current	16	A
P_C	Collector Power Dissipation ^③	1.8	W
$R_{\theta JC}$	Thermal resistance from junction to case ^②	3.0	°C/W
$R_{\theta JA}$	Thermal resistance from junction to ambient ^③	68	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Ordering Information (Example)

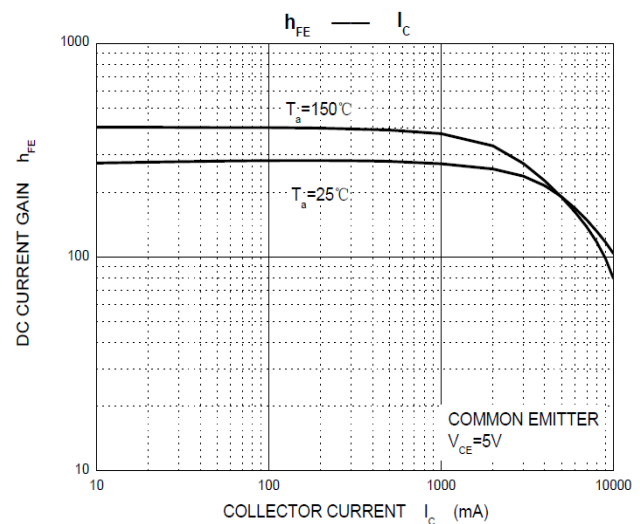
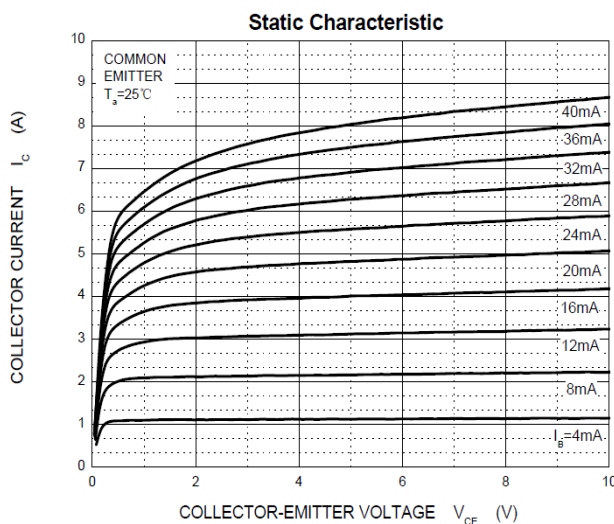
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
MJD44H11	TO-252-2L	MJD44H11	2,500	5,000	35,000	13"reel

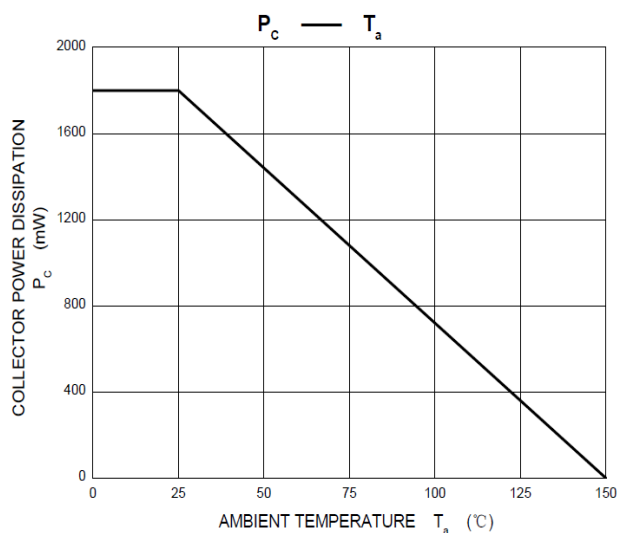
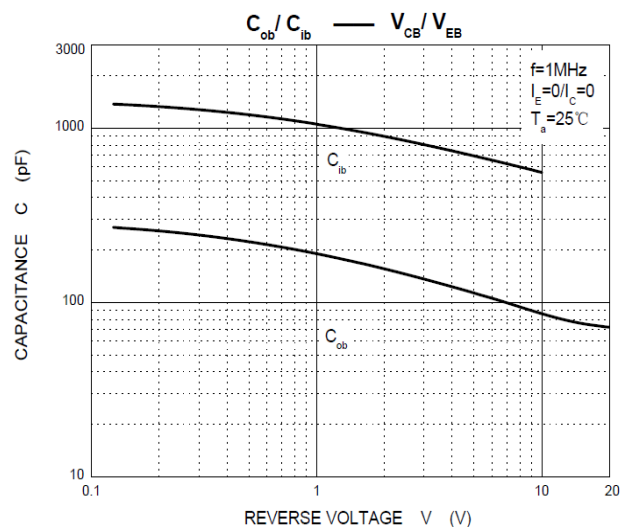
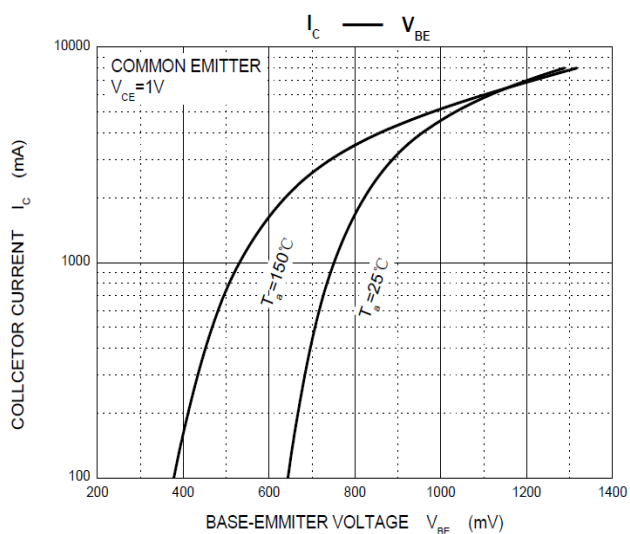
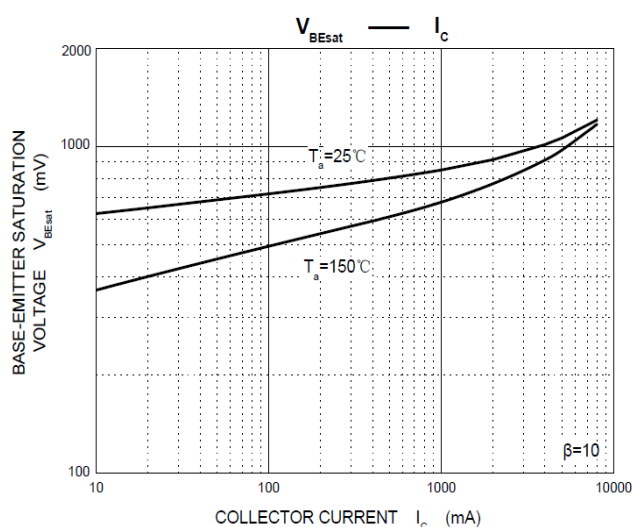
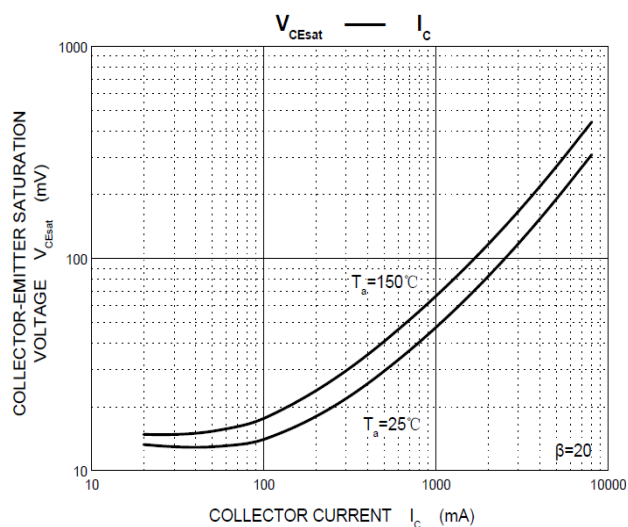
Electrical Characteristics (T_J=25°C unless otherwise noted)

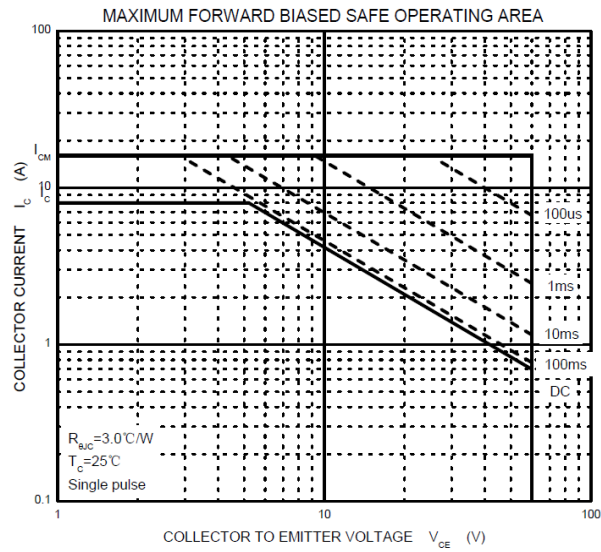
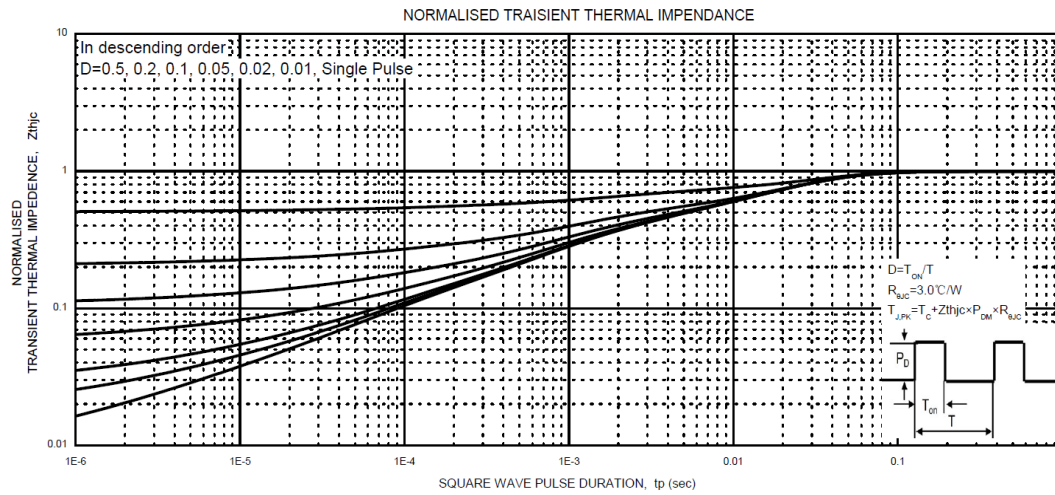
Symbol	Parameter	Condition	Min	Typ	Max	Unit
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =1mA, I _E =0	80	--	--	V
V _{(BR)CEO} ^⑤	Collector-emitter breakdown voltage	I _C =30mA, I _B =0	60	--	--	V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =1mA, I _C =0	6.0	--	--	V
I _{CBO}	Collector cut-off current	V _{CB} =80V, I _E =0	--	--	1.0	μA
I _{CEO}	Collector cut-off current	V _{CE} =60V, I _B =0	--	--	1.0	μA
I _{EBO}	Emitter cut-off current	V _{EB} =6V, I _C =0	--	--	1.0	μA
h _{FE} (1)	DC current gain	V _{CE} =1V, I _C =2A	60	--	--	
h _{FE} (2)		V _{CE} =1V, I _C =4A	40	--	--	
h _{FE} (3)		V _{CE} =5V, I _C =1A	80	--	600	
V _{CE(sat)} ^⑤	Collector-emitter saturation voltage	I _C =8A, I _B =0.4A	--	--	0.8	V
V _{BE(sat)} ^⑤	Base-emitter saturation voltage	I _C =8A, I _B =0.8A	--	--	1.5	V
f _T	Transition frequency	V _{CE} =10V, I _C =100mA, f = 1MHz	10	--	--	MHz

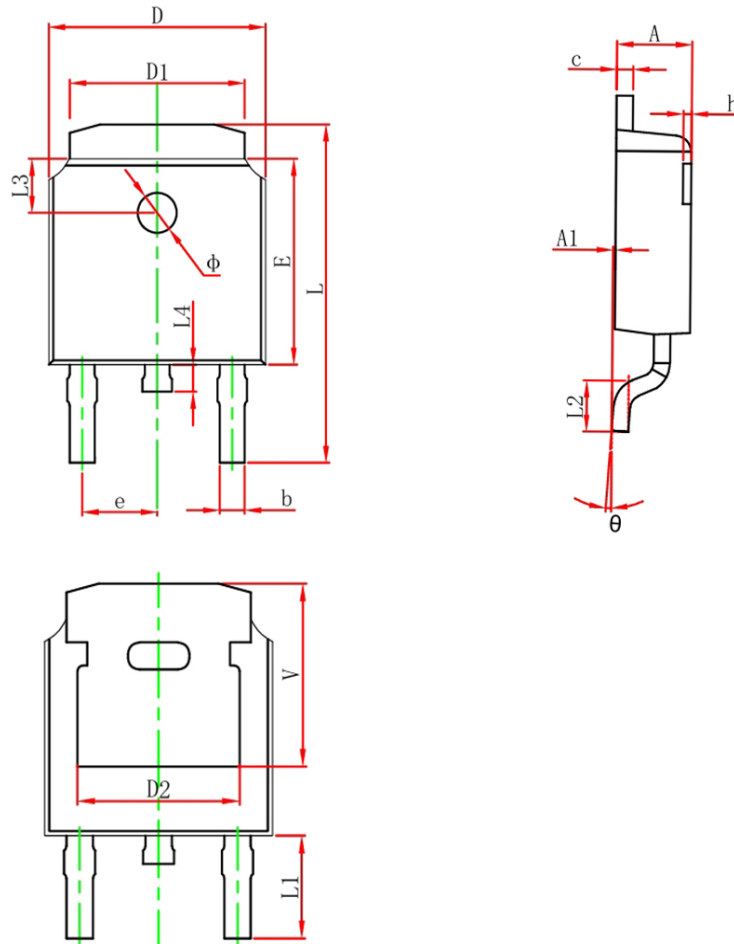
Notes:

1. Pw=10ms Single Pulse 10
2. Thermal resistance from junction to lead mounted on FR4 PCB double sided copper with mini pad, T_C=25° C.
3. Thermal resistance from junction to ambient mounted on FR4 PCB double sided copper with mini pad, T_A=25° C.
4. T_C=25°C Limited only by maximum temperature allowed.
5. Pulse Test: Pulse Width≤380μs, Duty Cycle≤2%.

Typical Operating Characteristics






TO-252-2L Package information


Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
b	0.635	0.770	0.025	0.030
c	0.450	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.712	10.312	0.386	0.406
L1	2.900 REF.		0.114 REF.	
L2	1.400	1.700	0.055	0.067
L3	1.600 REF.		0.063 REF.	
L4	0.600	1.000	0.024	0.039
φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.250 REF.		0.207 REF.	