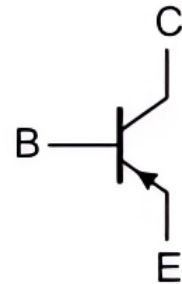


Features

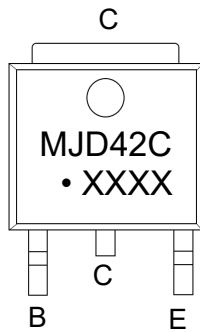
- Designed for General Purpose Amplifier and Low Speed Switching Applications
- Lead Formed for Surface Mount Applications in Plastic Sleeves (No Suffix)
- Straight Lead Version in Plastic Sleeves ("–1" Suffix)
- Lead Formed Version in 16 mm Tape and Reel ("T4" Suffix)
- Electrically Similar to Popular TIP41 and TIP42 Series
- Monolithic Construction With Built-in Base-Emitter Resistors



TO-252-2L top view



Schematic diagram



Marking and pin assignment



Halogen-Free

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-6	A
I_{CP}^*	Collector Current	-10	A
P_C	Collector Power Dissipation	1.25	W
$R_{\theta JC}^{①}$	Thermal resistance from junction to case	5.0	°C/W
$R_{\theta JA}^{②}$	Thermal resistance from junction to ambient	100	°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
MJD42C	TO-252-2L	MJD42C	2,500	5,000	35,000	13"reel

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

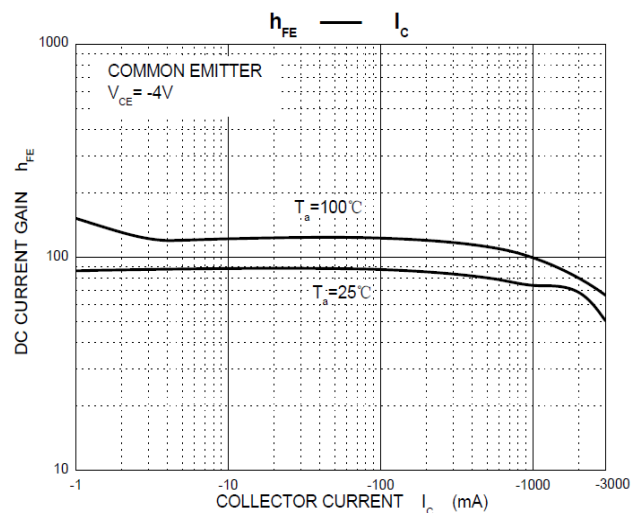
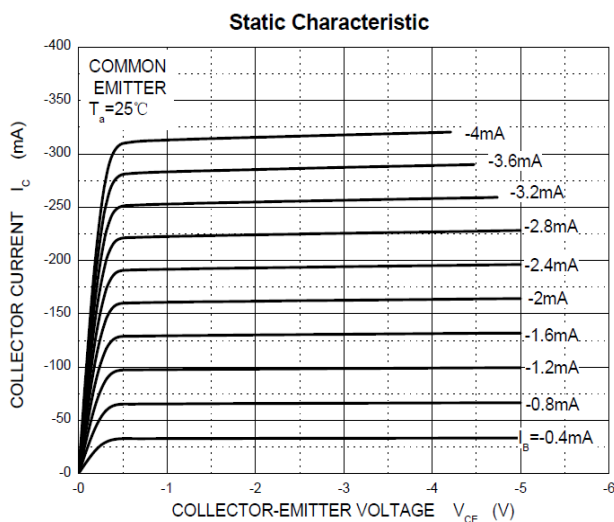
Symbol	Parameter	Condition	Min	Typ	Max	Unit
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =-100μA, I _E =0	-100	--	--	V
V _{CEO(sus)}	Collector-emitter breakdown voltage	I _C =-30mA, I _B =0	-100	--	--	V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =-100μA, I _C =0	-5	--	--	V
I _{CEO}	Collector cut-off current	V _{CE} =-60V, I _E =0	--	--	-50	μA
I _{EBO}	Emitter cut-off current	V _{EB} =-5V, I _C =0	--	--	-0.5	mA
h _{FE (1)}	DC current gain	V _{CE} =-4V, I _C =-0.3A	30	--	--	
h _{FE (2)}		V _{CE} =-4V, I _C =-3A	15	--	75	
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =-6A, I _B =-0.6A	--	--	-1.5	V
V _{BE}	Base-emitter voltage	V _{CE} =-4V, I _C =-6A	--	--	-2	V
f _T	Transition frequency	V _{CE} =-10V, I _C =-500mA, f =1MHz	3	--	--	MHz

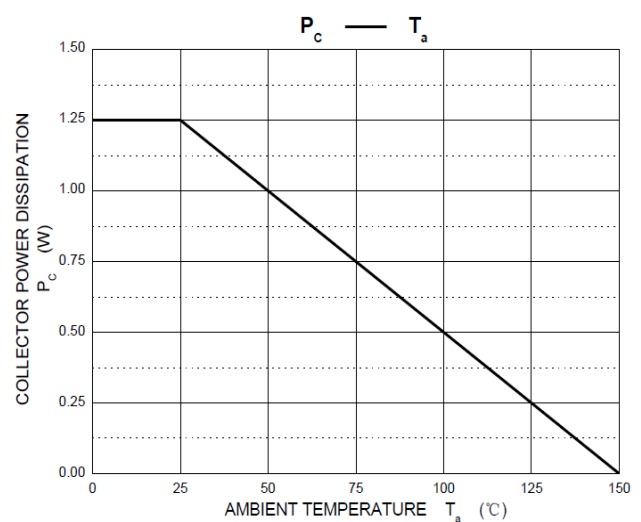
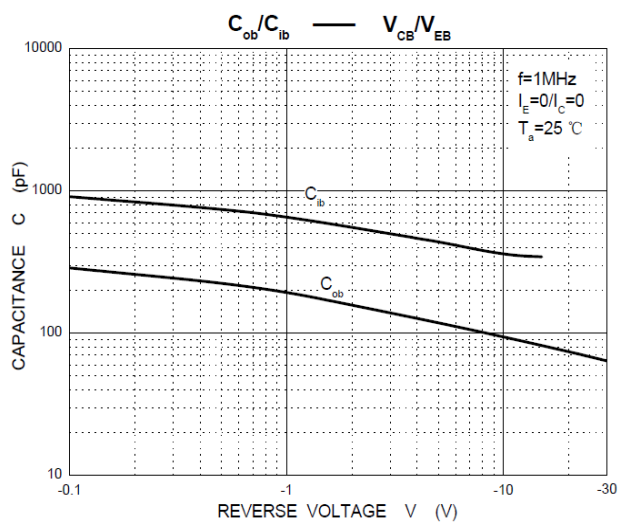
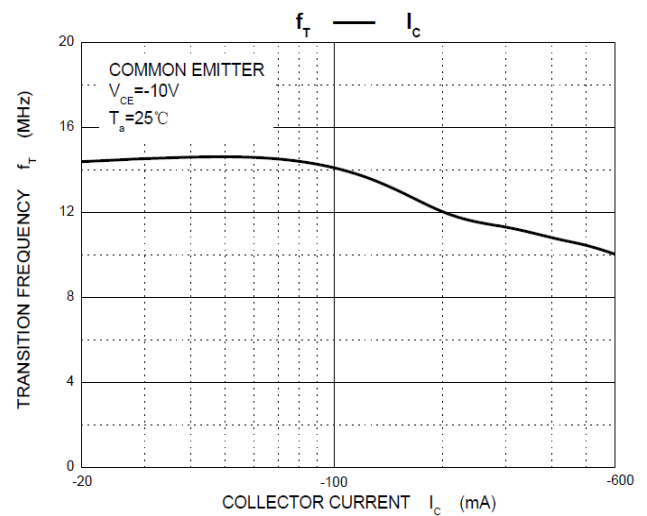
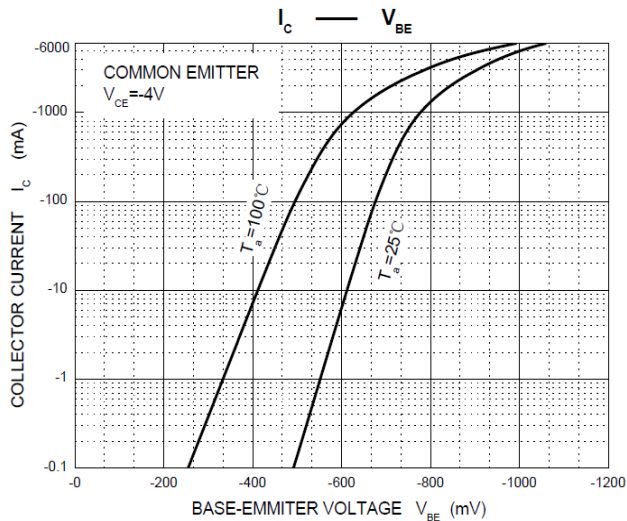
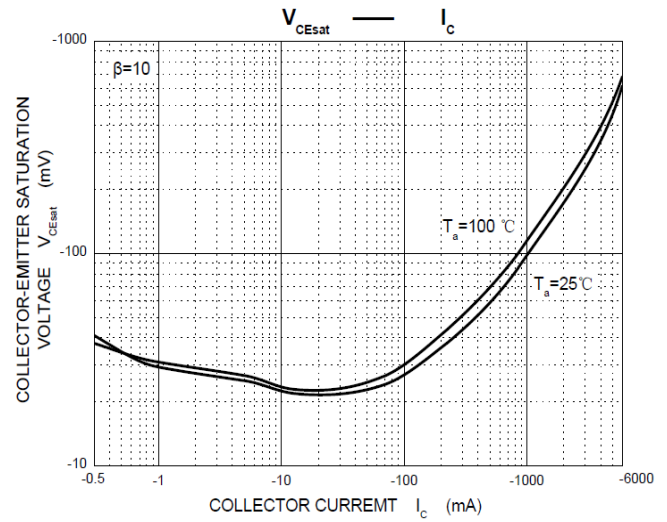
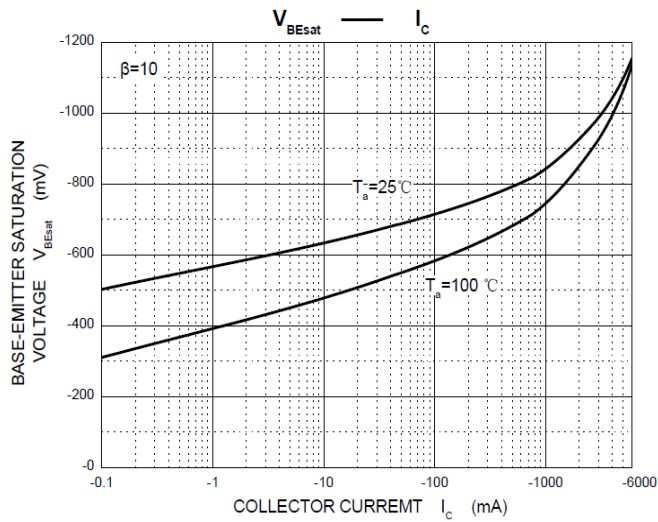
* Pulse Test: PW≤300μs, Duty Cycle≤2%

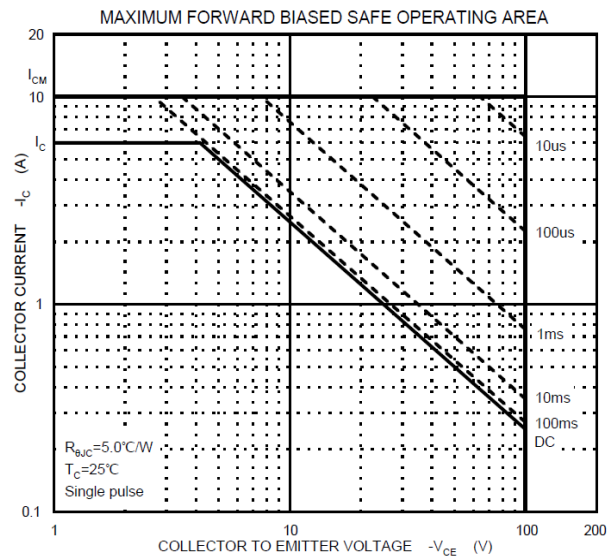
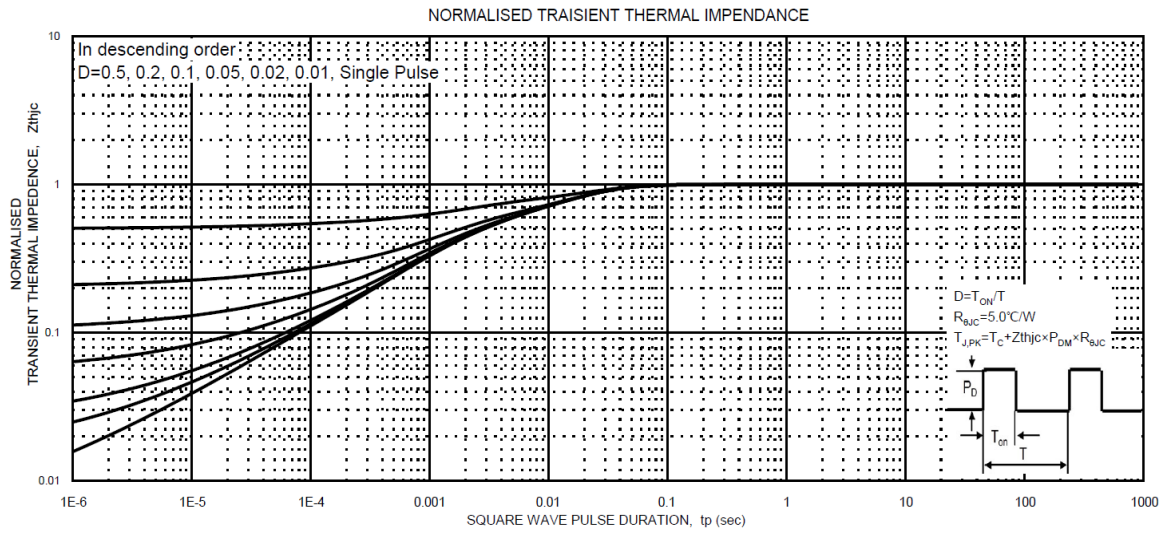
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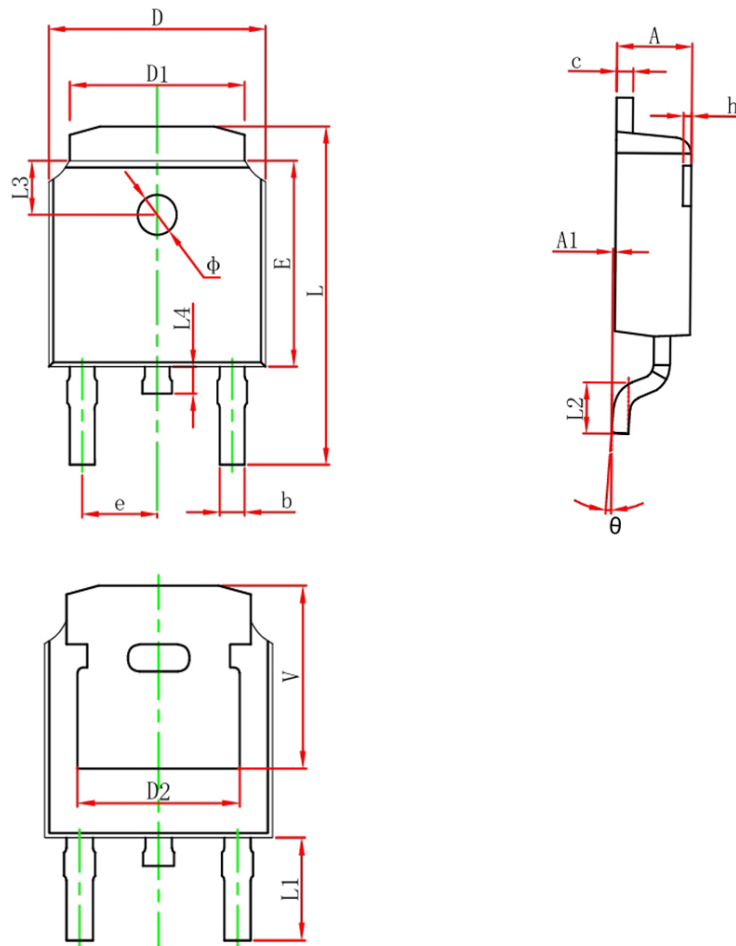
1.T_C=25 °C

2.Device mounted on 1 in2 FR-4 board with 2oz. single-sided Copper, in a still air environment with T_A=25°C.

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.	