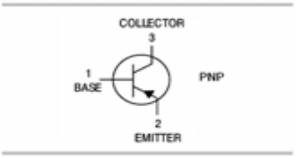
MJD42C

PNP Silicon Epitaxial Planar Transistor

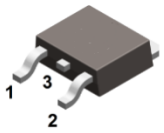
Features

- Epitaxial planar die construction
- Low formed for surface mount application



Mechanic al Data

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



TO-252

Maximum Ratings (@ T_A = 25℃ unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V_{CBO}	-100	V
Collector-Emitter Breakdown Voltage	V_{CEO}	-100	V
Emitter-Base Breakdown Voltage	V_{EBO}	-5	V
Collector Current (Continuous)	I_C	-6	A
Collector Current (Pulse)	I_{CM}	-10	A
Base Current (Continuous)	I_B	-2	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation (T_C = 25°C) *1	P_D	10	W
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	33	°C/W
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	12.5	°C/W
Thermal Resistance Junction-to-Lead *1	$R_{\theta JL}$	1.65	°C/W
Junction Temperature	T_J	-65 ~ +150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

Note 1: The data tested by surface mounted on a 25.4mm * 25.4mm * 1mm FR4-epoxy P.C.B

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Electrical Characteristics (@ T_A = 25℃ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = -100μA, I_E = 0	-100	-	-	V
Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	I_C = -30mA, I_B = 0	-100	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = -100μA, I_C = 0	-5	-	-	V
Collector Cut-off Current	I_{CBO}	V_{CB} = -100V, I_E = 0	-	-	-50	μA
Collector Cut-off current	I_{CEO}	V_{CE} = -60V, I_B = 0	-	-	-50	μA
Collector Cut-off current	I_{CES}	V_{CE} = -100V, V_{EB} = 0	-	-	-10	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = -5V, I_C = 0	-	-	-0.5	mA
DC Current Gain	h_{FE}	V_{CE} = -4V, I_C = -0.3A	30	-	-	-
		V_{CE} = -4V, I_C = -3A	15	-	75	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	I_C = -6A, I_B = -0.6A	-	-	-1.5	V
Base-emitter Turn-on Voltage	$V_{BE(ON)}$	I_C = -4V, V_{CE} = -6A	-	-	-2	V
Transition Frequency	f_T	I_C = -0.5A, V_{CE} = -10V f = 1MHz	3	-	-	MHZ

Ratings and Characteristic Curves (@ T_A = 25℃ unless otherwise specified)

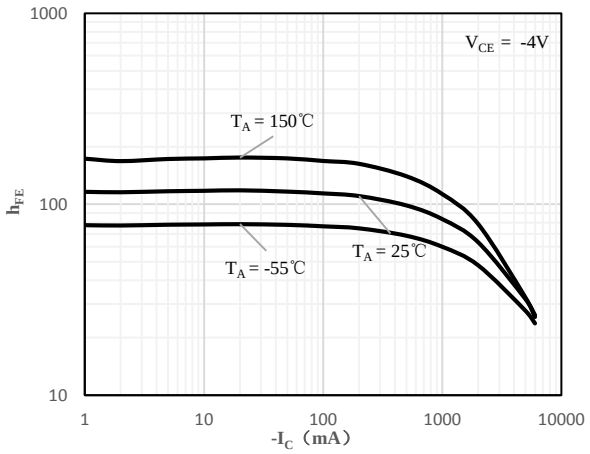

Fig 1 DC Current Gain as a Function of Collector Current

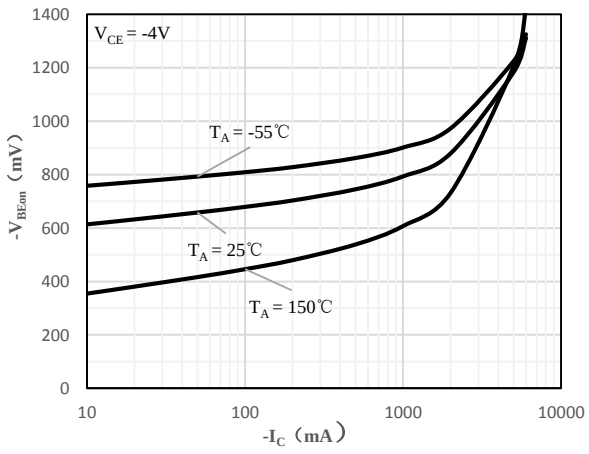

Fig 2 Base−Emitter Turn−on Voltage as a Function of Collector Current

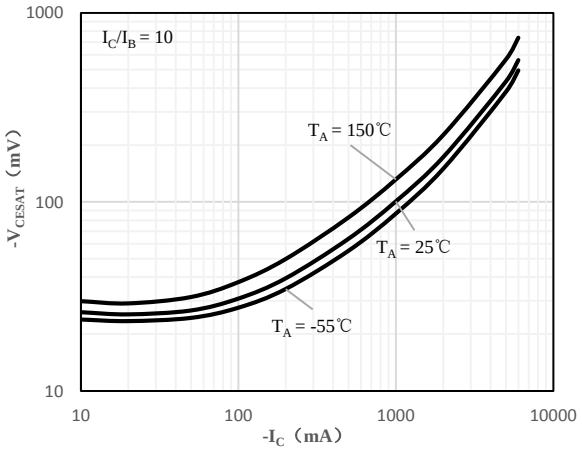

Fig 3 Collect-Emitter Saturation Voltage as a Function of Collector Current

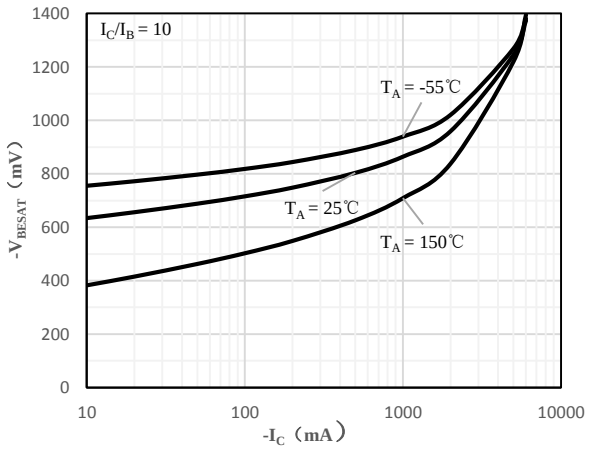

Fig 4 Base-Emitter Saturation Voltage as a Function of Collector Current

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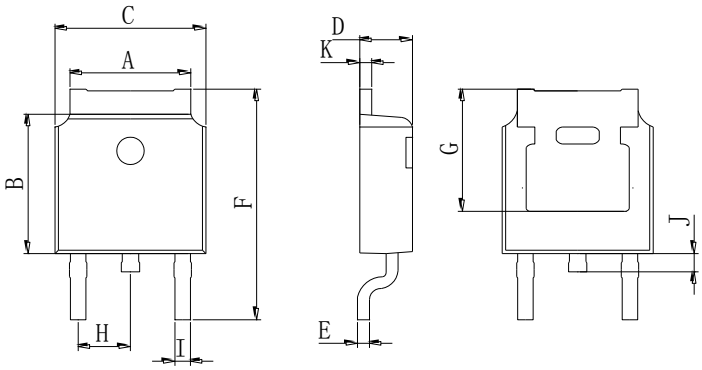
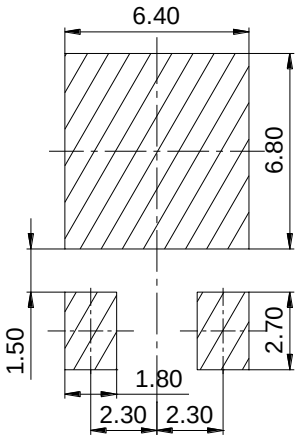
Package Outline Dimensions (Unit: mm)



TO-252		
Dimension	**Min.**	**Max.**
A	5.05	5.65
B	5.80	6.40
C	6.25	6.85
D	2.20	2.40
E	0.40	0.60
F	9.71	10.31
G	5.05	5.65
H	2.10	2.50
I	0.70	0.90
J	0.50	0.70
K	0.40	0.60

Mounting Pad Layout (Unit: mm)

TO-252



Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
MJD42C	TO-252	80 pcs / Tube or 2500 pcs / Tape & Reel	MJD42C