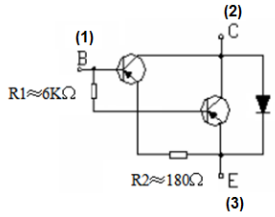
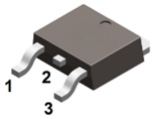
MJD127

Darlington Amplifier Transistor(PNP)

Features

- Low collector-emitter saturation voltage
- Fast switching speeds
- Complement to MJD122





TO-252

Mechanical Data

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

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
MJD127	TO-252	80 pcs / Tube or 2500 pcs / Tape & Reel	MJD127

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

Parameter	Symbol	Value	Unit
Collector-Emitter Breakdown Voltage	V_{CEO}	-100	V
Collector-Base Voltage	V_{CBO}	-100	V
Emitter-Base Breakdown Voltage	V_{EBO}	-5	V
Collector Current (Continuous)	I_C	-8	A
Collector Current (Pulse)	I_{CM}	-16	A
Base Current	I_B	-120	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation (T_A = 25°C)	P_D	1.5	W
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	22	°C/W
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	2.9	°C/W
Thermal Resistance Junction-to-Lead *1	$R_{\theta JL}$	1.4	°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 34mm * 34mm * 1mm aluminum heatsink

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	I_C = -30mA, I_B = 0	-100	-	-	V
Collector Cut-off Current	I_{CEO}	V_{CE} = -50V, I_B = 0	-	-	-10	μA
Collector Cut-off Current	I_{CBO}	V_{CB} = -100V, I_E = 0	-	-	-10	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = -5V, I_C = 0	-	-	-2	mA
DC Current Gain	h_{FE}	V_{CE} = -4V, I_C = -4A	1000	-	12000	-
		V_{CE} = -4V, I_C = -8A	100	-	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	I_C = -4A, I_B = -16mA	-	-	-2	V
		I_C = -8A, I_B = -80mA	-	-	-4	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	I_C = -8A, I_B = -80mA	-	-	-4.5	V
Base-emitter on Voltage	$V_{BE(on)}$	V_{CE} = -4V, I_C = -4A	-	-	-2.8	V
Output Capacity	C_{ob}	V_{CB} = -10V, f = 0.1MHz, I_E = 0	-	-	300	pF

MJD127

Darlington Amplifier Transistor(PNP)

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

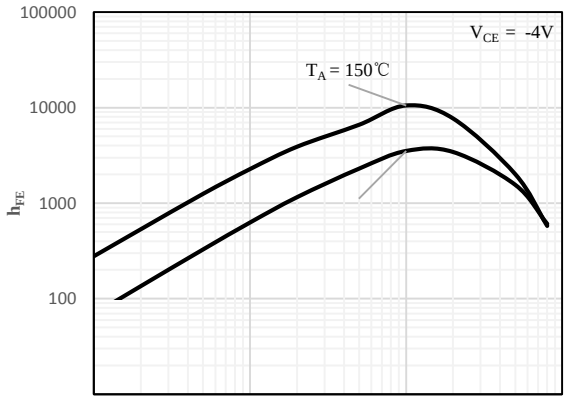


Fig 1 h_{FE} vs. I_C

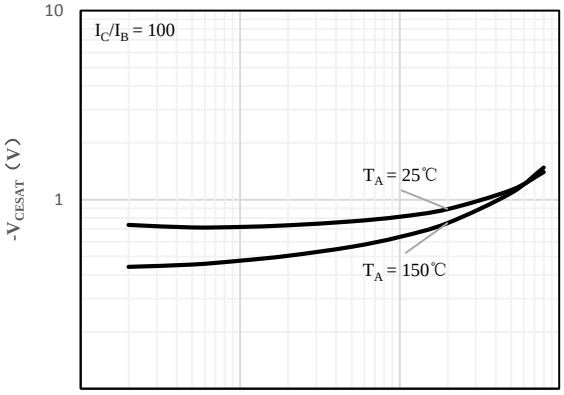
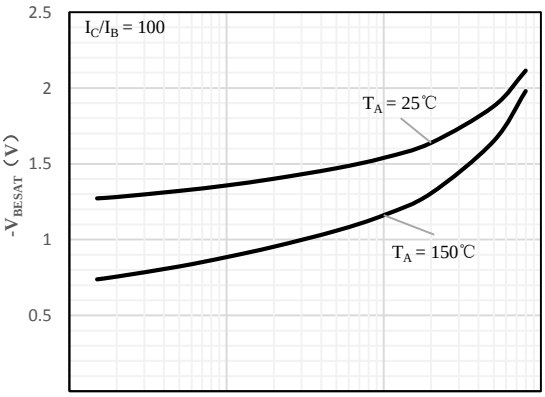
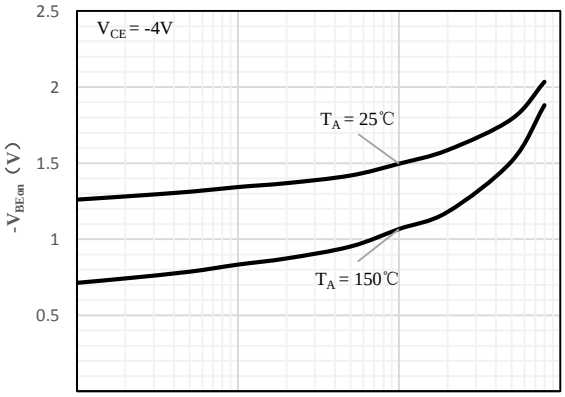


Fig 2 $V_{CE(sat)}$ vs. I_C

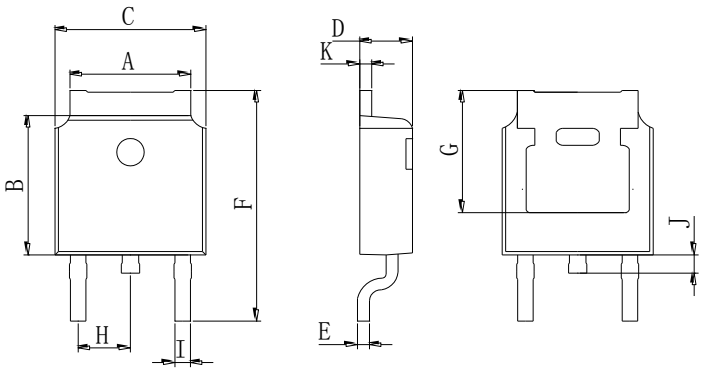




MJD127

Darlington Amplifier Transistor(PNP)

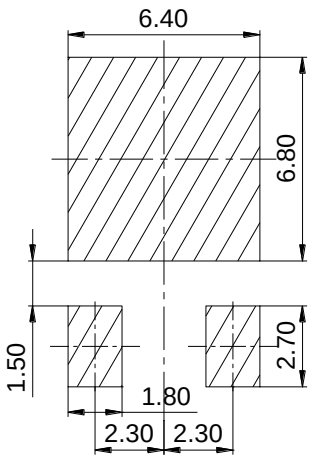
Package Outline Dimensions (Unit: mm)



TO-252		
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
All Dimensions in mm		

Mounting Pad Layout (Unit: mm)

TO-252



Packge	Packing	Box Size L×W×H(mm)	Quatity(pcs/box)	Carton Size L×W×H(mm)	Quatity(pcs/carton)
TO-252	80pcs/Tube	560×150×50	4000	570×290×180	40000
TO-252	2500pcs/Reel	335×335×40	2500	370×370×440	12500/25000