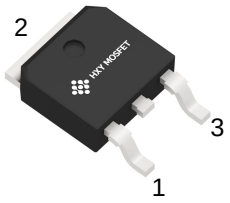
MJD122T4G
NPN-Darlington Transistors

Features
- High DC Current Gain
- Electrically Similar to Popular TIP122
- Built-in a Damper Diode at E-C

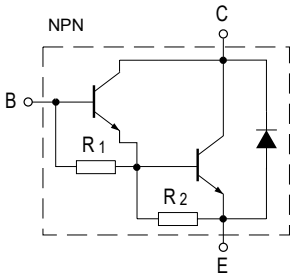
1.BASE
2.COLLECTOR
3.EMITTER



TO-252-2L
(DPAK)

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
MJD122T4G	TO-252-2L (DPAK)	MJD122	2500



R_1 typ. =5 KΩ R_2 typ. =210Ω

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

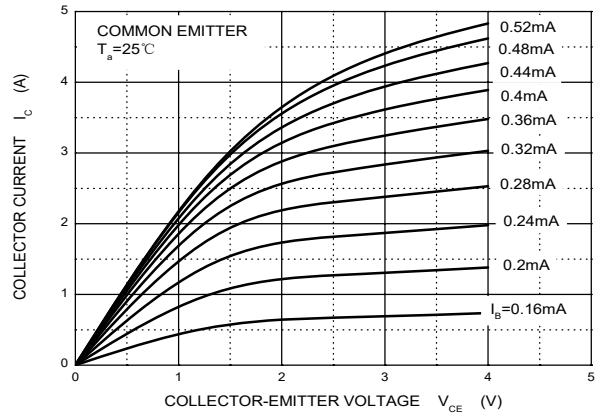
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	8	A
P_C	Collector Power Dissipation	1.5	W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55-150	℃

Electrical Characteristics (Ta=25°C unless otherwise specified)

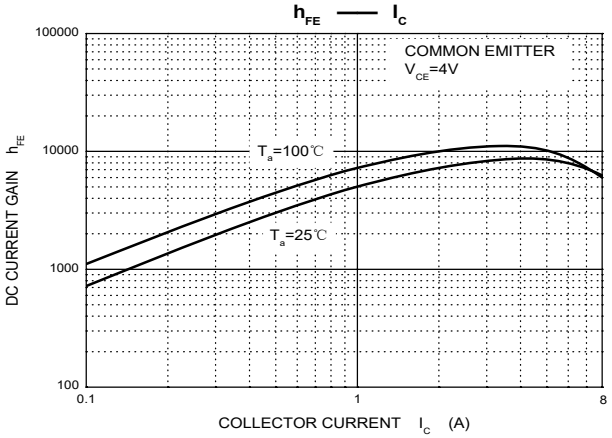
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=1mA,I_E=0	100			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=30mA,I_B=0	100			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=3mA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=100V,I_E=0			10	μA
Collector-emitter cut-off current	I_{CEO}	V_{CE}=50V,I_E=0			10	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			2	mA
DC current gain	$h_{FE(2)}$	V_{CE}=4V,I_C=4A	1000		12000	
	$h_{FE(3)}$	V_{CE}=4V,I_C=8A	100			
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$	I_C=4A,I_B=16mA			2	V
	$V_{CE(sat)(2)}$	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 voltage	V_{BE}	V_{CE}=4V,I_C=4A			2.8	V
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=0.1MHz			200	pF

Typical Characteristics

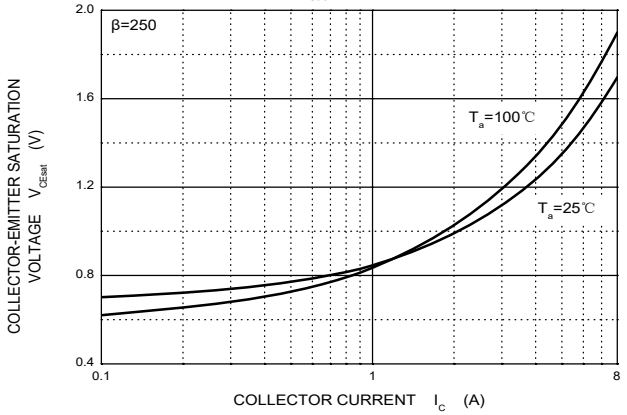
Static Characteristic



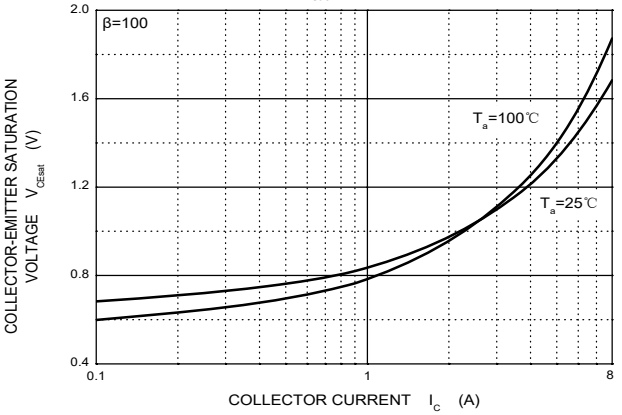
h_{FE} — I_C



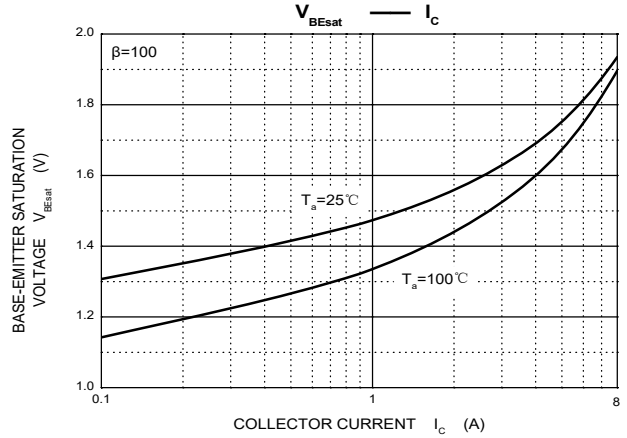
V_{CEsat} — I_C



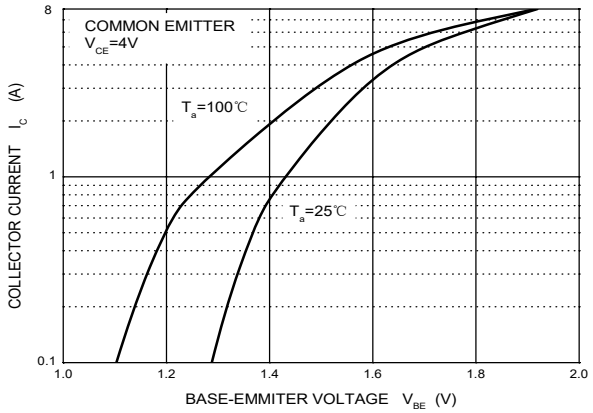
V_{CEsat} — I_C



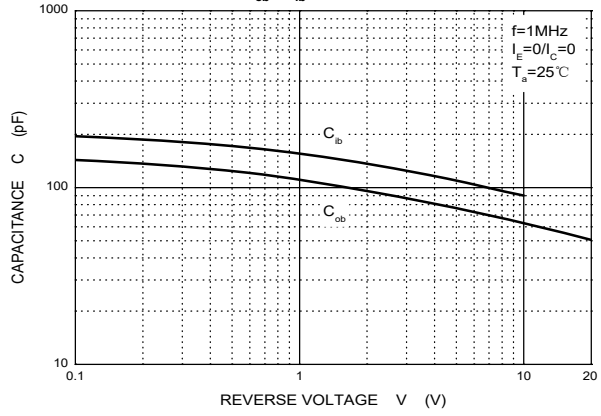
V_{BEsat} — I_C



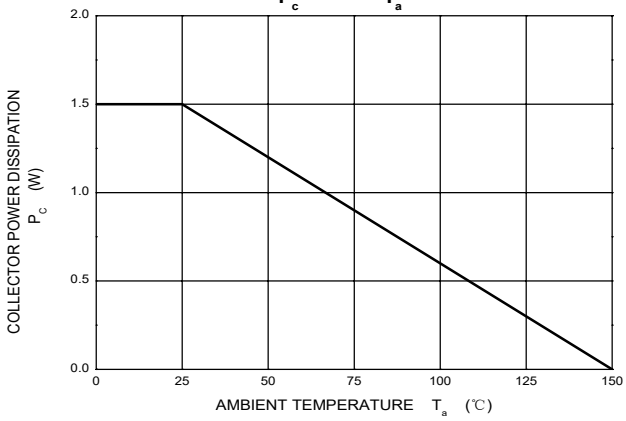
I_C — V_{BE}



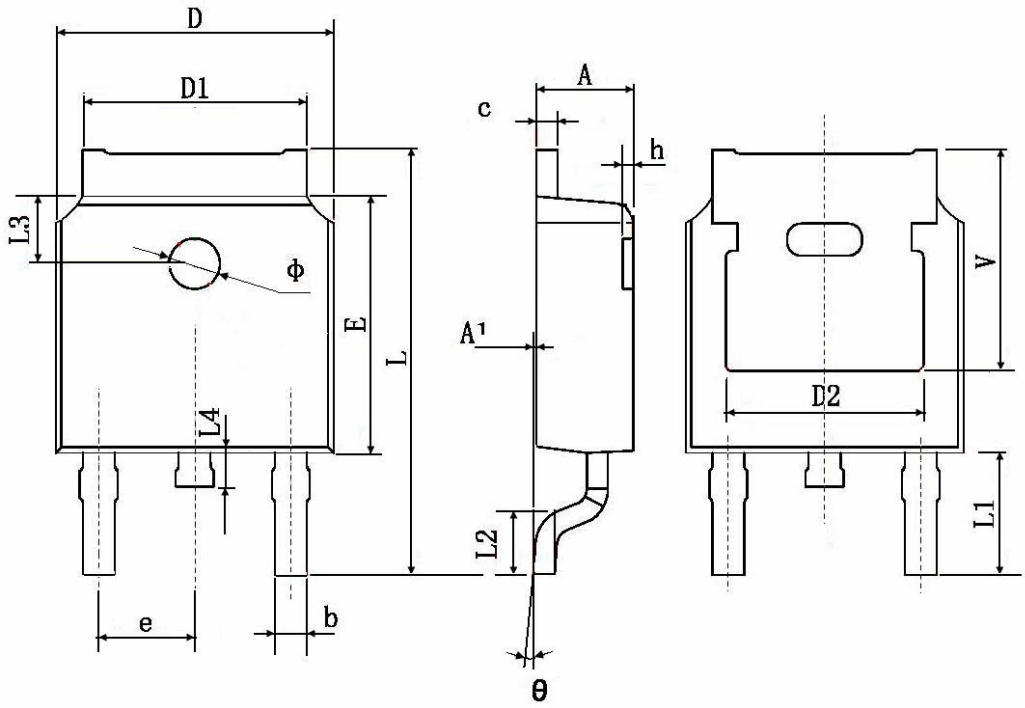
C_{ob} / C_{ib} — V_{CB} / V_{EB}



P_c — T_a



TO-252-2L(DPAK) Package Information



Symbol	Dimensions In Millimeters		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	0.660	0.860	0.026	0.034
c	0.460	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	0.483 TYP.		0.190 TYP.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.800	10.400	0.386	0.409
L1	2.900 TYP.		0.114 TYP.	
L2	1.400	1.700	0.055	0.067
L3	1.600 TYP.		0.063 TYP.	
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	5.350 TYP.		0.211 TYP.	

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