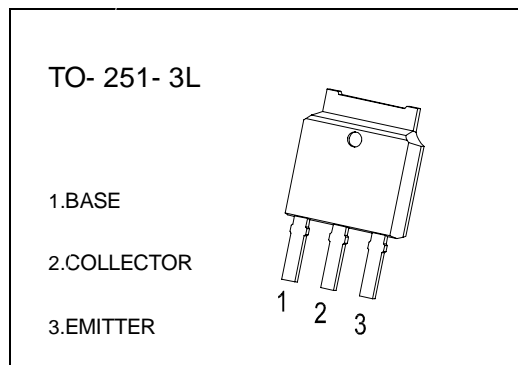


MJD122I NPN Silicon Darlington Transistor

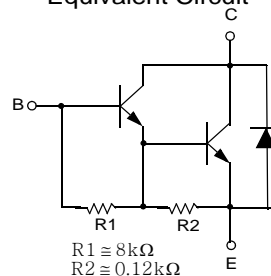
FEATURES

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

We declare that the material of product compliance with RoHS requirements.



Equivalent Circuit



MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CB0}	Collector- Base Voltage	100	V
V_{CE0}	Collector- Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	5	V
I_c	Collector Current - Continuous	8	A
P_c	Collector Dissipation	1.5	W
T_J, T_{stg}	Junction and Storage Temperature	-55-150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CB0}$	$I_c=1\text{mA}, I_E=0$	100			V
Collector-emitter breakdown voltage	$V_{(BR)CE0}$	$I_c=30\text{mA}, I_B=0$	100			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=3\text{mA}, I_C=0$	5			V
Collector cut-off current	I_{CB0}	$V_{CB}=100\text{V}, I_E=0$			10	μA
Collector-emitter cut-off current	I_{CE0}	$V_{CE}=50\text{V}, I_E=0$			10	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			2	mA
DC current gain	$h_{FE(2)}$	$V_{CE}=4\text{V}, I_C=4\text{A}$	1000		12000	
	$h_{FE(3)}$	$V_{CE}=4\text{V}, I_C=8\text{A}$	100			
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C=4\text{A}, I_B=16\text{mA}$			2	V
	$V_{CE(sat)2}$	$I_C=8\text{A}, I_B=80\text{mA}$			4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=8\text{A}, I_B=80\text{mA}$			4.5	V
Base-emitter voltage*	V_{BE}	$V_{CE}=4\text{V}, I_C=4\text{A}$			2.8	V
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=0.1\text{MHz}$			200	pF

Typical Characteristics

