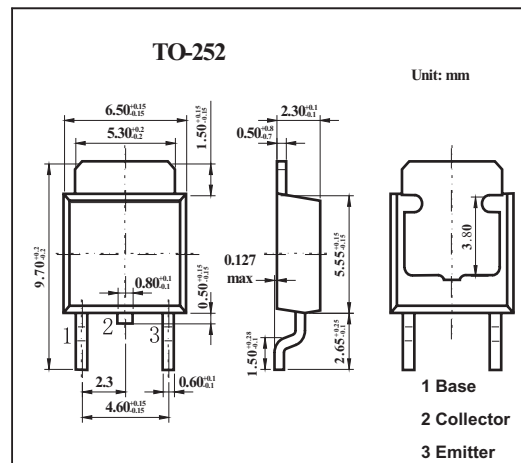


NPN Epitaxial Silicon Transistor

MJD47;MJD50

■ Features

- Load Formed for Surface Mount Application
- Straight Lead

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$ unless otherwise noted

Parameter	Symbol	Rating	Unit
Collector-Emitter Voltage MJD47	V_{CE0}	350	V
		500	V
Collector-Emitter Voltage MJD50	V_{CE0}	250	V
		400	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	1	A
Collector Current (Pulse)	I_{CP}	2	A
Base Current	I_B	0.6	A
Collector Dissipation ($T_C=25^\circ\text{C}$)	P_C	15	W
Collector Dissipation ($T_a=25^\circ\text{C}$)		1.56	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-65 to 150	$^\circ\text{C}$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$ unless otherwise noted

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-Emitter Sustaining Voltage * MJD47	$V_{CE(sus)}$	$I_C = 30\text{mA}, I_B = 0$	250			V
			400			V
Collector Cut-off Current MJD47	I_{CEO}	$V_{CE} = 150\text{V}, I_B = 0$			0.2	mA
		$V_{CE} = 300\text{V}, I_B = 0$			0.2	mA
Collector Cut-off Current MJD50	I_{CES}	$V_{CE} = 350, V_{EB} = 0$			0.1	mA
		$V_{CE} = 500, V_{EB} = 0$			0.1	mA
Emitter Cut-off Current	I_{EBO}	$V_{BE} = 5\text{V}, I_C = 0$			1	mA
DC Current Gain *	h_{FE}	$V_{CE} = 10\text{V}, I_C = 0.3\text{A}$	30		150	
		$V_{CE} = 10\text{V}, I_C = 1\text{A}$	10			
Collector-Emitter Saturation Voltage *	$V_{CE(sat)}$	$I_C = 1\text{A}, I_B = 0.2\text{A}$			1	V
Base-Emitter Saturation Voltage *	$V_{BE(sat)}$	$V_{CE} = 10\text{A}, I_C = 1\text{A}$			1.5	V
Current Gain Bandwidth Product	f_T	$V_{CE} = 10\text{V}, I_C = 0.2\text{A}$	10			MHz

*Pulse Test: $PW \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$