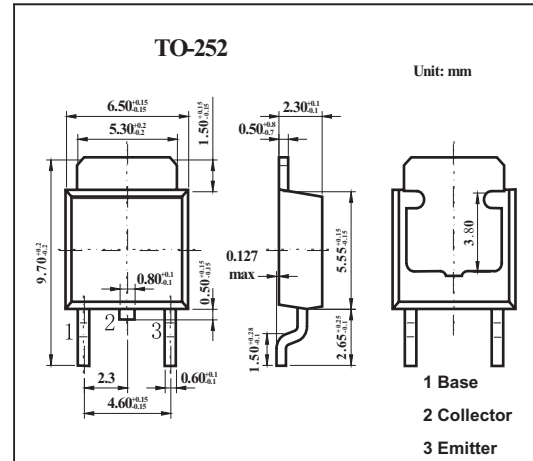


## NPN Epitaxial Silicon Transistor

## 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	$V_{CBO}$	350	V
			MJD50	500
Collector-Emitter Voltage	MJD47	$V_{CEO}$	250	V
			MJD50	400
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	Testconditions	Min	Typ	Max	Unit
Collector-Emitter Sustaining Voltage *	MJD47	$V_{CE(sus)}$	$I_C = 30\text{mA}, I_B = 0$	250		V
				MJD50	400	
Collector Cut-off Current	MJD47	$I_{CEO}$	$V_{CE} = 150\text{V}, I_B = 0$		0.2	mA
				MJD50	$V_{CE} = 300\text{V}, I_B = 0$	
Collector Cut-off Current	MJD47	$I_{CES}$	$V_{CE} = 350, V_{EB} = 0$		0.1	mA
				MJD50	$V_{CE} = 500, V_{EB} = 0$	
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  $\leq 2\%$