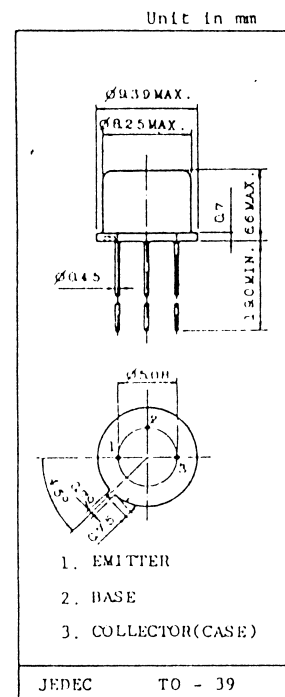


2SA503, 2SA504

SILICON PNP EPITAXIAL

MAXIMUM RATINGS (25°C)

Rating	Symbol	Value	Unit
Collector-Base Voltage V_{CB}	V_{CBO}	60	V
Collector-Base Voltage V_{CB}	V_{CBO}	-40	V
Collector-Base Voltage V_{CB}	V_{CBO}	-50	V
Collector-Base Voltage V_{CB}	V_{CBO}	-30	V
Emitter-Base Voltage V_{EB}	V_{EBO}	-5	V
Collector Current	I_C	-600	mA
Emitter Current	I_E	600	mA
Total Device Dissipation P_D	P_D	800	mW
Total Device Dissipation P_D	P_D	6	W
Operating Junction and Storage Temperature Range	T_j	175	°C
Operating Junction and Storage Temperature Range	T_{stg}	-65~175	°C



Package Outline

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

Characteristic	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-Base Cutoff Current	I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0$	—	—	-0.5	μA
Emitter-Base Cutoff Current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$	—	—	-1	μA
D.C. Current Gain (Note 1)	h_{FE}	$V_{CE} = -2\text{V}, I_C = -150\text{mA}$	30	—	300	
Collector Saturation Voltage V_{CE}	$V_{CE(sat)}$	$I_C = -150\text{mA}, I_B = -15\text{mA}$	—	-0.2	-0.5	V
Base Saturation Voltage V_{BE}	$V_{BE(sat)}$	$I_C = -150\text{mA}, I_B = -15\text{mA}$	—	-0.8	-1.5	V
Gain-Bandwidth Product	f_T	$V_{CE} = -10\text{V}, I_E = 10\text{mA}$	50	130	—	MHz
Output Capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$	—	18	30	pF
Base Resistance	$r_{bb'}$	$V_{CE} = -6\text{V}, I_E = 1\text{mA}, f = 30\text{MHz}$	—	10	30	Ω
Switching Speeds	Turn-on Time t_{on}	Note 2.	—	25	—	ns
	Storage Time t_{str}		—	500	—	ns
	Fall Time t_f		—	80	—	ns

According to the value of h_{FE} ,

(Note 1) the 2SA503 and 2SA504 are classified as follows.

項 目	色ドット	直流電流増幅率 h_{FE}	
		最 小	最 大
2SA503—O	橙	30	90
2SA504—O	橙	30	90
2SA503—Y	黄	50	150
2SA504—Y	黄	50	150
2SA503—GR	緑	100	300
2SA504—GR	緑	100	300

Note 2. Switching Speed Circuit

