

2N4863

NPN SILICON TRANSISTOR JEDEC TO39

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

	SYMBOL		UNIT
Collector-Base Voltage	V_{CB0}	140	V
Collector-Emitter Voltage	V_{CE0}	120	V
Collector Current	I_C	2.0	A
Power Dissipation ($T_C=100^\circ\text{C}$)	P_D	4.0	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200	$^\circ\text{C}$
Thermal Resistance	θ_{JC}	25	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
I_{CB0}	$V_{CB}=60\text{V}$		100	nA
I_{CEV}	$V_{CE}=140\text{V}, V_{EB}=0.5\text{V}$		10	μA
I_{CEO}	$V_{CE}=60\text{V}$		10	μA
I_{EBO}	$V_{EB}=8.0\text{V}$		10	μA
BV_{CB0}	$I_C=1.0\text{mA}$	140		V
BV_{CE0}	$I_C=10\text{mA}$	120		V
BV_{EBO}	$I_E=10\mu\text{A}$	8.0		V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		0.2	V
$V_{CE(SAT)}$	$I_C=2.0\text{A}, I_B=200\text{mA}$		1.5	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=500\text{mA}$		1.2	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=500\text{mA}$	50	150	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=2.0\text{A}$	15		
f_T	$V_{CE}=20\text{V}, I_C=100\text{mA}$	50		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		50	pF
t_{on}	$V_{CC}=30\text{V}, I_C=1.0\text{A}, I_{B1}=I_{B2}=100\text{mA}$	0.3	TYP	μs
t_{off}	$V_{CC}=30\text{V}, I_C=1.0\text{A}, I_{B1}=I_{B2}=100\text{mA}$		1.7	μs



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