

Silicon NPN Power Transistors

TIP3055

ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=30\text{mA}; I_B=0$	60		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=0.4\text{A}$		1.1	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=3.3\text{A}$		3.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=4\text{A}; V_{CE}=4\text{V}$		1.8	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=30\text{V}; I_B=0$		0.7	mA
I_{CER}	Collector Cutoff Current	$V_{CE}=70\text{V}; R_{BE}=100\ \Omega$		1.0	mA
I_{CEV}	Collector Cutoff Current	$V_{CE}=100\text{V}; V_{BE(OFF)}=1.5\text{V}$		5.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=7\text{V}; I_C=0$		5.0	mA
h_{FE-1}	DC Current Gain	$I_C=4\text{A}; V_{CE}=4\text{V}$	20	70	
h_{FE-2}	DC Current Gain	$I_C=10\text{A}; V_{CE}=4\text{V}$	5		
$I_{s/b}$	Second Breakdown Collector Current with Base Forward Biased	$V_{CE}=30\text{V}; t=1.0\text{s}; \text{Nonrepetitive}$	3.0		A
f_T	Current-Gain—Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=10\text{V}; f_{test}=1.0\text{MHz}$	2.5		MHz

