

NPN SILICON TRANSISTOR

主要用途

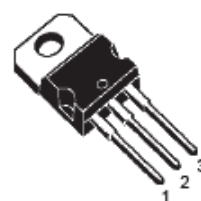
该器件为达林顿三极管内含阻尼二极管，用于高增益电路。

外形图及引脚排列

极限值 ($T_a=25^{\circ}\text{C}$)

T_{stg} ——贮存温度.....	$-65\sim 150^{\circ}\text{C}$
T_j ——结温.....	150°C
P_C ——集电极耗散功率 ($T_c=25^{\circ}\text{C}$)	65W
P_C ——集电极耗散功率 ($T_A=25^{\circ}\text{C}$)	2W
V_{CBO} ——集电极—基极电压.....	100V
V_{CEO} ——集电极—发射极电压.....	100V
V_{EBO} ——发射极—基极电压.....	5V
I_C ——集电极电流.....	5A
I_{CP} ——集电极电流 (脉冲)	8A
I_B ——基极电流.....	120mA

TO-220



TO-220

1—基 极, B
2—集电极, C
3—发射极, E

电参数 ($T_a=25^{\circ}\text{C}$)

参数符号	符 号 说 明	最小值	典型值	最大值	单 位	测 试 条 件
BV_{CBO}	集电极—基极击穿电压	100			V	$I_C=1\text{mA}$, $I_E=0$
BV_{CEO}	集电极—发射极击穿电压	100			V	$I_C=5\text{mA}$, $I_B=0$
I_{CEO}	集电极—发射极截止电流			0.5	mA	$V_{CE}=50\text{V}$, $I_B=0$
I_{CBO}	集电极—基极截止电流			0.2	mA	$V_{CB}=100\text{V}$, $I_E=0$
I_{EBO}	发射极—基极截止电流			2.0	mA	$V_{EB}=5\text{V}$, $I_C=0$
H_{FE}	直流电流增益	1000				$V_{CE}=3\text{V}$, $I_C=0.5\text{A}$
$V_{CE(sat1)}$	集电极—发射极饱和电压			2.0	V	$I_C=3\text{A}$, $I_B=12\text{mA}$
$V_{CE(sat2)}$				4.0	V	$I_C=5\text{A}$, $I_B=20\text{mA}$
$V_{BE(on)}$	基极—发射极导通电压			2.5	V	$V_{CE}=3\text{V}$, $I_C=3\text{A}$
C_{ob}	共基极输出电容			200	pF	$V_{CB}=10\text{V}$, $I_E=0$, $f=0.1\text{MHz}$

特性曲线

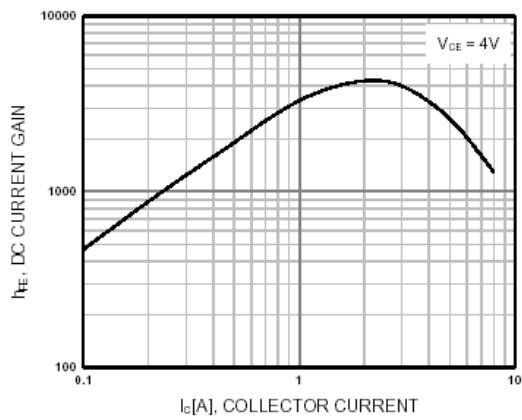


Figure 1. DC current Gain

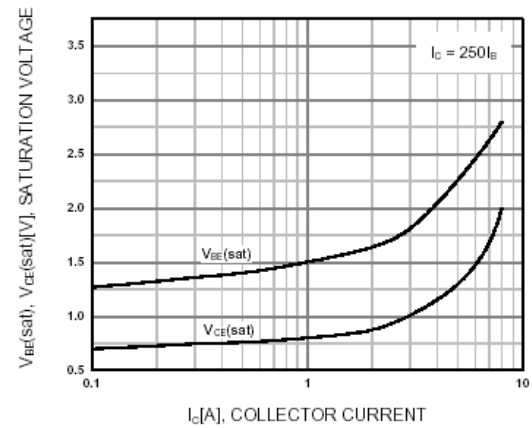


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

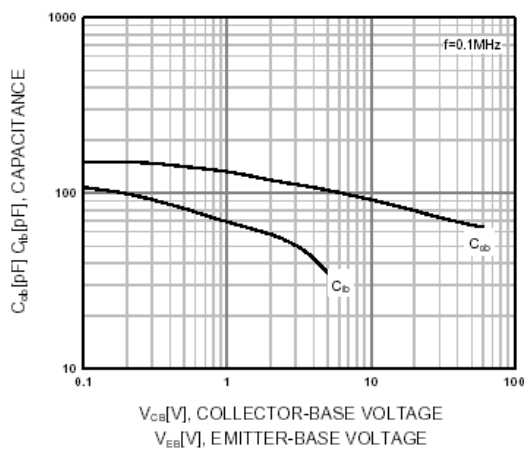


Figure 3. Output and Input Capacitance
vs. Reverse Voltage

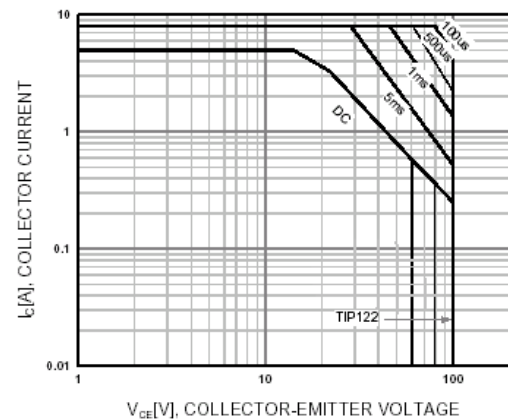


Figure 4. Safe Operating Area

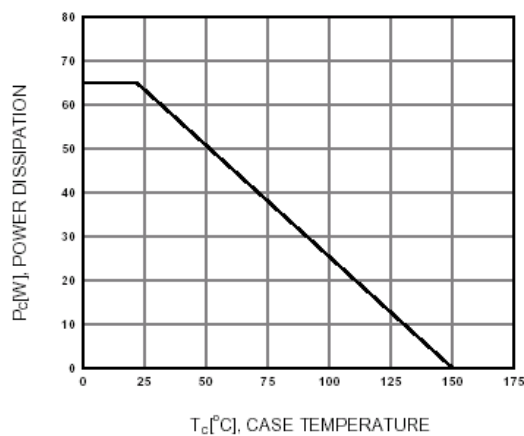


Figure 5. Power Derating

NOTE:

1. Exceeding the maximum ratings of the device in performance may cause damage to the device, even the permanent failure, which may affect the dependability of the machine. Please do not exceed the absolute maximum ratings of the device when circuit designing.
2. When installing the heat sink, please pay attention to the torsional moment and the smoothness of the heat sink.
3. MOSFETs is the device which is sensitive to the static electricity, it is necessary to protect the device from being damaged by the static electricity when using it.
4. Shenzhen Minos reserves the right to make changes in this specification sheet and is subject to change without prior notice.

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