工业型号	公司型号	打印标识	封装形式	包装规格
MJD122	H122G	J122G	TO-252	2500Pcs/卷盘，5000Pcs/盒，25Kpcs/箱

Designed for general purpose amplifier and low speed switchingapplications.

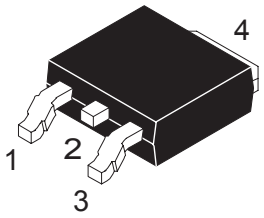
DPAK For Surface Mount Applications
Designed for general purpose amplifier and low speed switchingapplications.

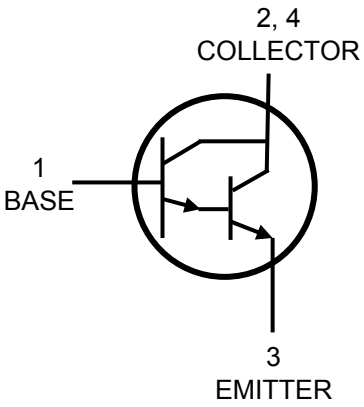
Features

- ◆Lead Formed for Surface Mount Applications
- ◆in Plastic Sleeves
- ◆Surface Mount Replacements for 2N6040−2N6045 Series TIP120−TIP122 Series, and TIP125−TIP127 Series
- ◆Monolithic Construction With Built−in Base−Emitter Shunt Resistors
- ◆High DC Current Gain: hFE=2500(Typ) @ I_C=4.0Adc
  Epoxy Meets UL 94 V−0 @ 0.125 in
- ◆ESD Ratings: Human Body Model, 3B≥8000V
  Machine Model, C≥400V
- ◆Pb−Free Packages are Available

用于音频功率放大器

MJD122 Series Pin Assignment





■ ABSOLUTE MAXIMUM RATINGS（Ta=25℃，unless otherwise specified）

SYMBOL	PARAMETER		VALUE	UNIT
Ic	Collector Current（DC）		8	A
	Collector Current（PULSE）		16	
I_B	Base Current		120	mA
V_{CBO}	Collector−Emitter Voltage		100	V
V_{CB}	Collector−Base Voltage		100	
V_{EB}	Emitter−Base Voltage		5	
P_D	Total Power Dissipation	T_A=25℃	20	W
		Derate above 25℃	0.16	W/℃
T_J, T_{stg}	Operating and Storage Junction Temperature Range		-65 to +150	℃
$R_{\theta JC}$	Thermal Resistance, Junction−to−Case		6.25	°C/W
$R_{\theta JA}$	Thermal Resistance,Junction−to−Ambient		71.4	

■ ELECTRICAL CHARACTERISTICS（Ta=25℃, unless otherwise specified）

SYMBOL	CHARACTERISTICS	TEST CONDITION	MIN	MAX	UNIT
I_{CEO}	Collector Cut-off Current	V_{CE}=50V. I_B=0	--	10	μA
I_{CBO}	Collector Cutoff Current	V_{EB}=100V, I_E=0	--	10	
I_{EBO}	Emitter Cut-off Currrent	V_{EB}=5V, I_C=0	--	2	mA
V_{CE0}	Collector-Emitter Sustaing Voltage	I_C=30mA, I_B=0	100		V
V_{CE}	Collector-Emitter Saturation Voltage	I_C=4A, I_B=16mA I_C=8A, I_B=80mA		2 4	
$V_{BE(sat)}$	Base−Emitter Saturation Voltage	I_C=8A, V_{CE}=4V		4.5	
$V_{BE(on)}$	Base−Emitter On Voltage	I_C=4A, V_{CE}=4V		2.8	
hFE	DC Current Gain	I_C=4A, V_C=4V I_C=8A, V_C=4V	1000 100	12000 ------	

DYNAMIC CHARACTERISTICS

SYMBOL	CHARACTERISTICS	TEST CONDITION	MIN	MAX	UNIT
$\|h_{fe}\|$	Current−Gain−Bandwidth Product	I_C=3A, V_{CE}=4V, f=1MHz	4	--	MHz
C_{ob}	Output Capacitance	V_{CB}=10V, I_E=0, f=1MHz	--	200	pF
h_{fe}	Small−Signal Current Gain	I_C=3A, V_{CE}=4V, f=1MHz	300	--	

1、Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted.
Productperformance may not be indicated by the Electrical Characteristics if operated under different conditions
2、Pulse Test: Pulse Width 300 s, Duty Cycle 2%.

TYPICAL ELECTRICAL CHARACTERISTICS

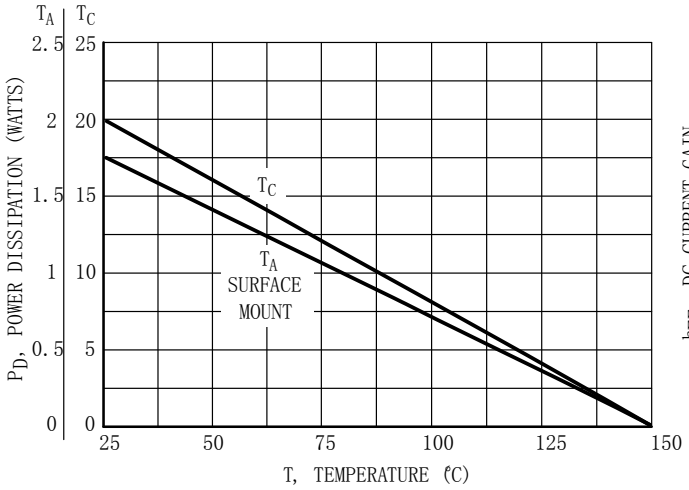


Figure 1. Power Derating

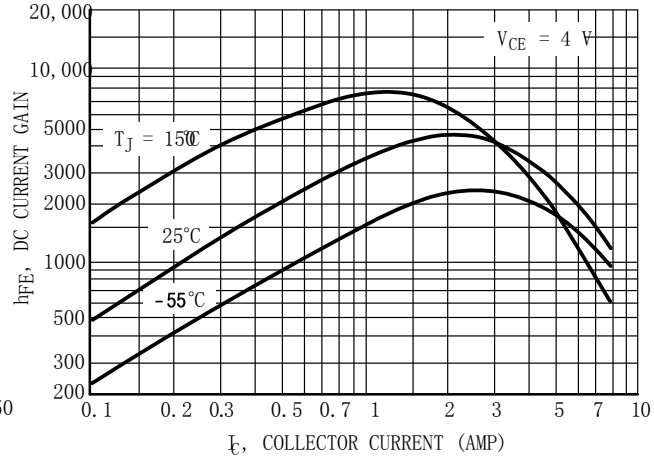


Figure 2. DC Current Gain

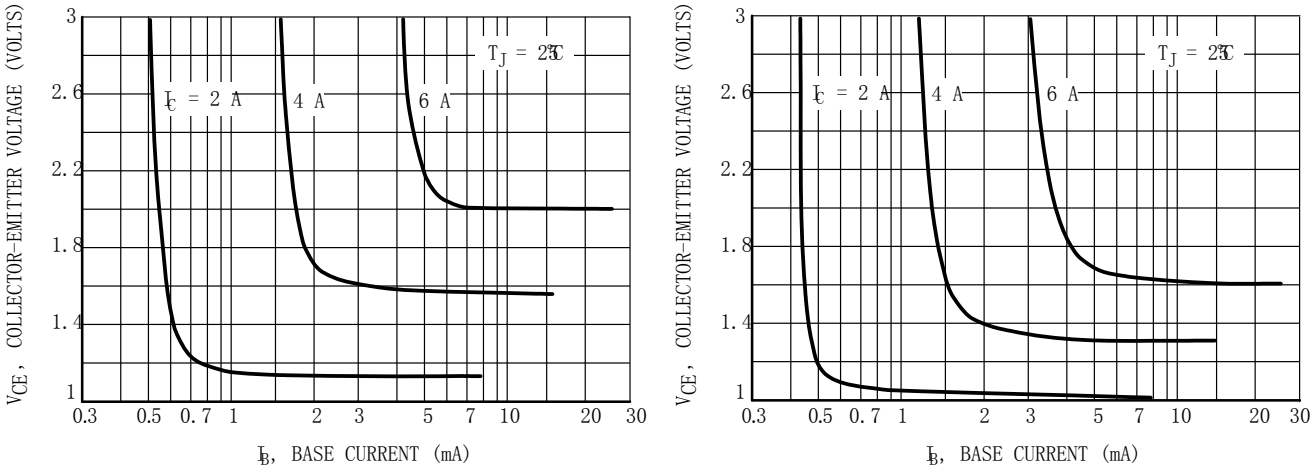


Figure 3. Collector Saturation Region

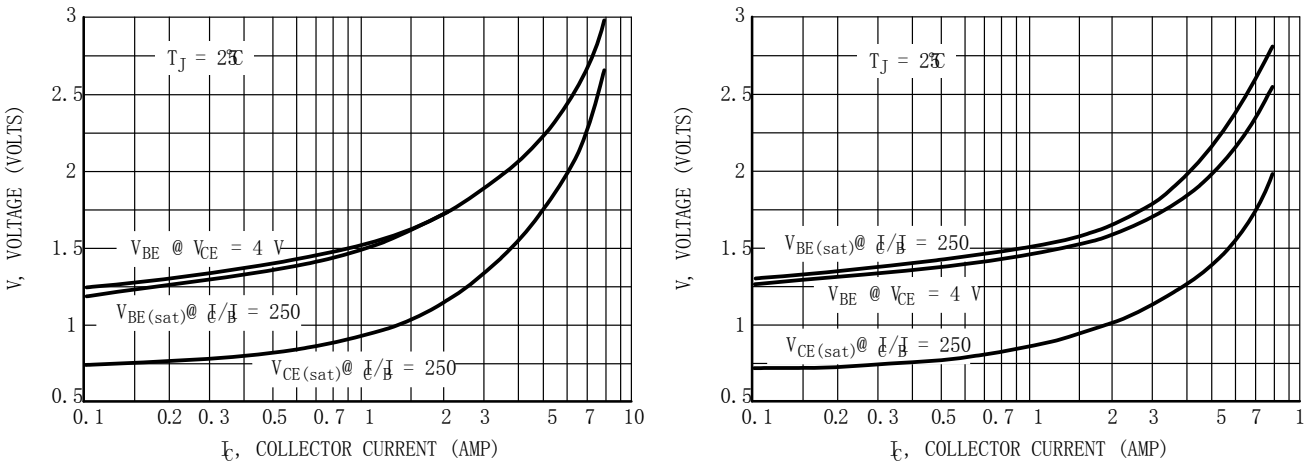


Figure 4. "On" Voltages

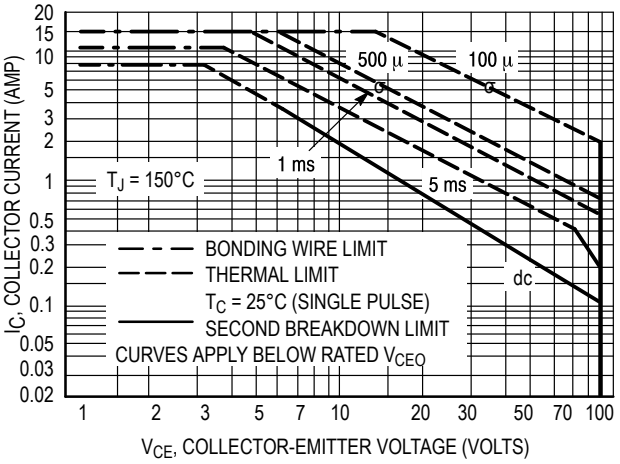


Figure 5. Maximum Forward Bias Safe Operating rea

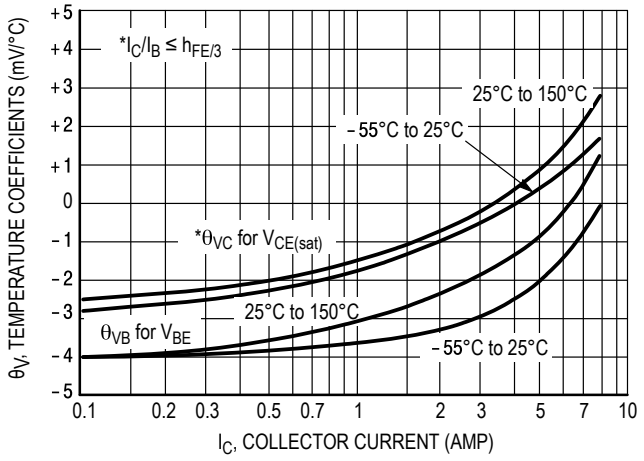
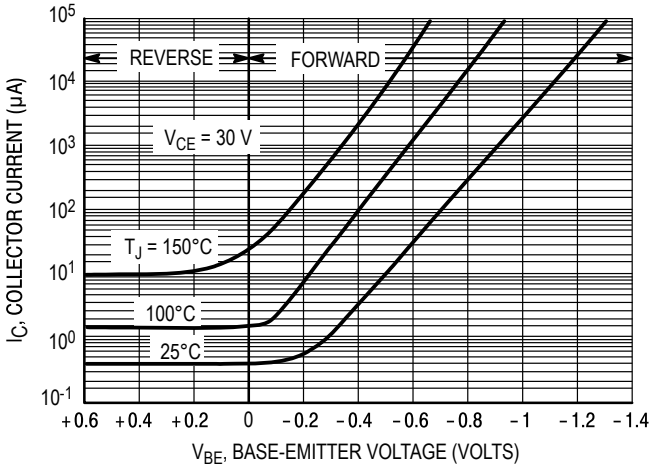


Figure 6. Temperature Coefficients



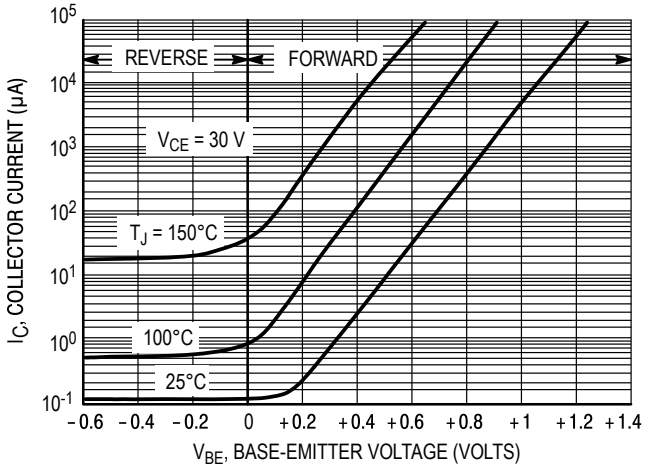


Figure 7. Collector Cut−Off Region

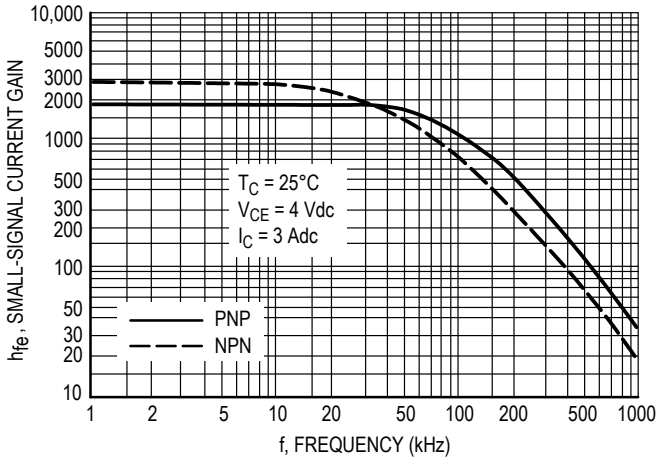


Figure 8. Small−Signal Current Gain

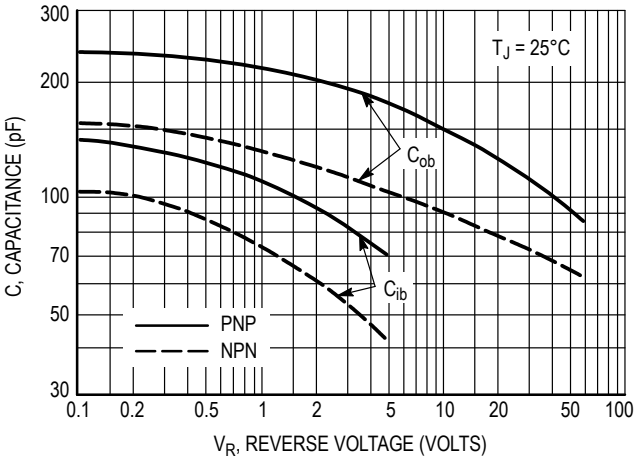


Figure 9. Capacitance

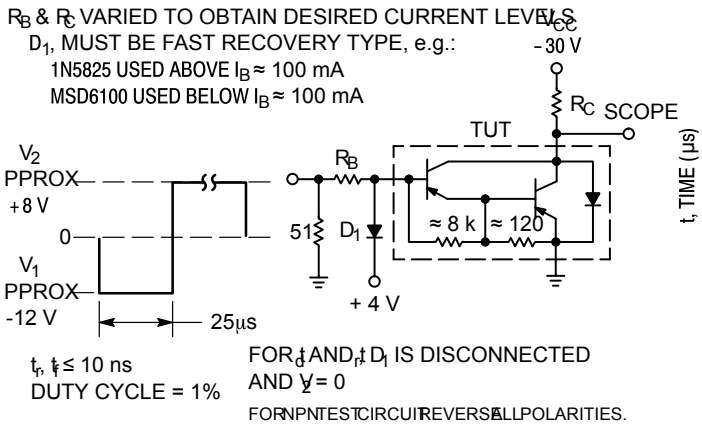


Figure 10. Switching Times Test Circuit

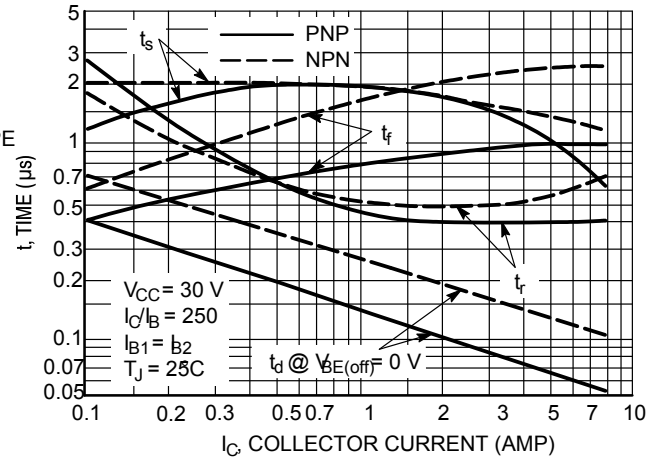


Figure 11. Switching Times

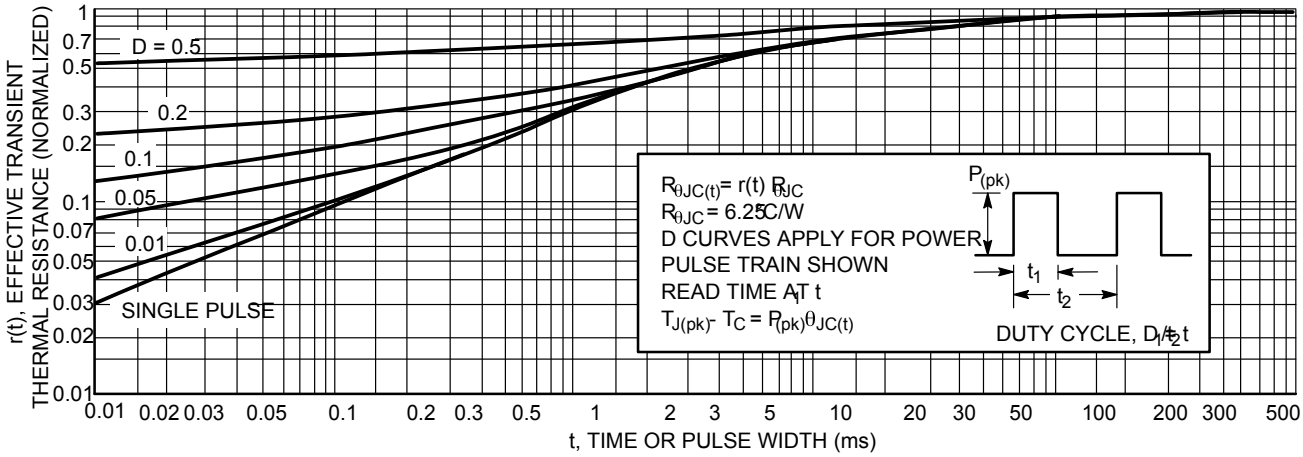


Figure 13. Thermal Response

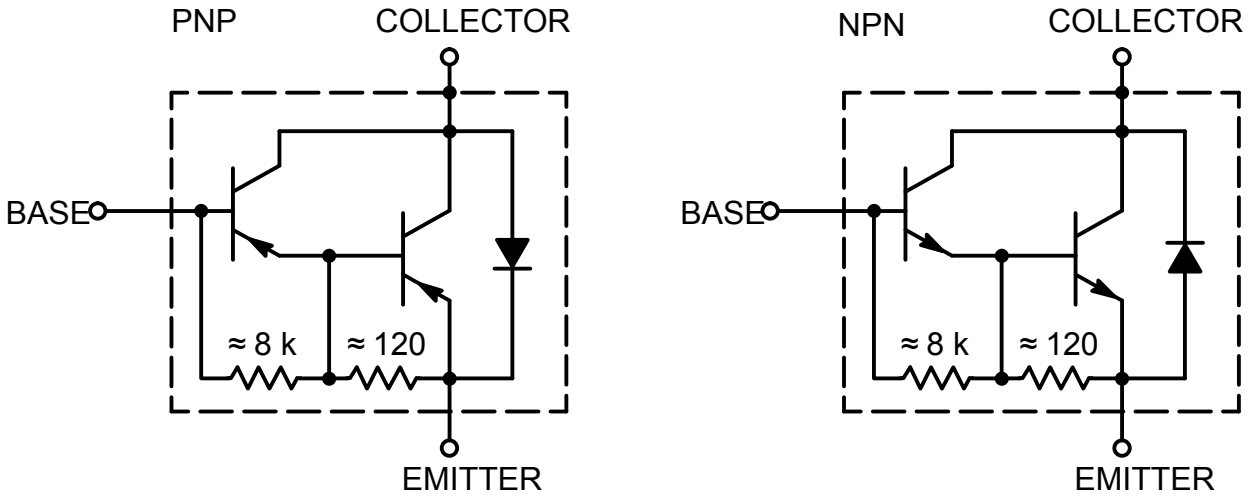
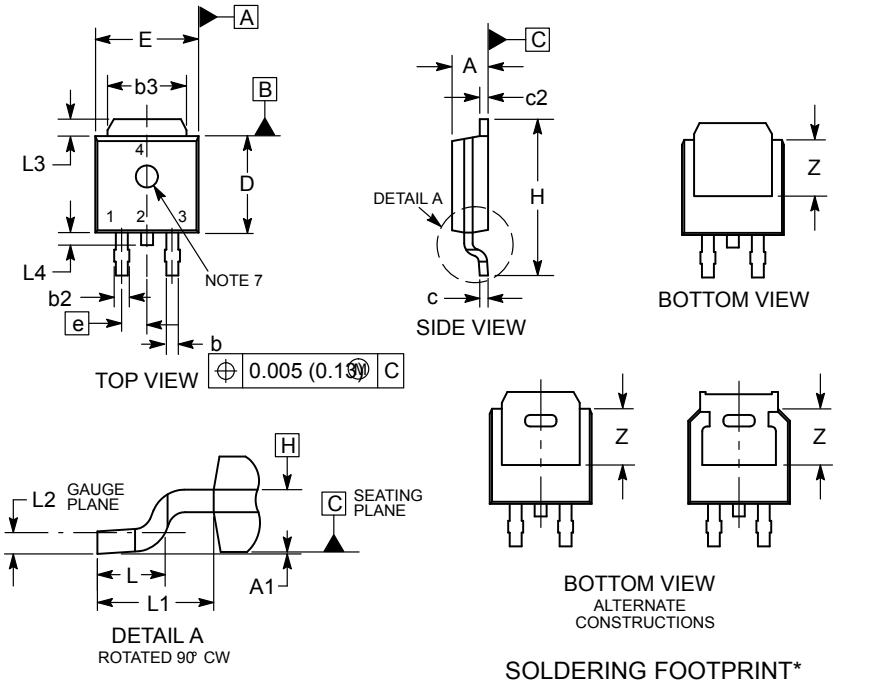


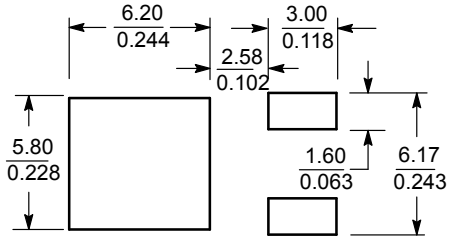
Figure 14. Darlington Schematic

PACKAGE DIMENSIONS（mm）



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.086	0.094	2.18	2.38
A1	0.000	0.005	0.00	0.13
b	0.025	0.035	0.63	0.89
b2	0.028	0.045	0.72	1.14
b3	0.180	0.215	4.57	5.46
c	0.018	0.024	0.46	0.61
c2	0.018	0.024	0.46	0.61
D	0.235	0.245	5.97	6.22
E	0.250	0.265	6.35	6.73
e	0.090 BSC		2.29 BSC	
H	0.370	0.410	9.40	10.41
L	0.055	0.070	1.40	1.78
L1	0.114 REF		2.90 REF	
L2	0.020 BSC		0.51 BSC	
L3	0.035	0.050	0.89	1.27
L4	---	0.040	---	1.01
Z	0.155	---	3.93	---

SOLDERING FOOTPRINT*



SCALE 3:1 (mm / inches)

STYLE 1:
PIN 1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR

Manufacturers version information
2007-03-11， HAOHAI ™ Product Data-S1.0
2010-04-10， HAOHAI ™ Product Data-S1.1
2014-07-11， HAOHAI ™ Product Data-S2.0
2018-10-23， HAOHAI ™ Product Data-S2.1
2021-06-04， HAOHAI ™ Product Data-S2.2

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