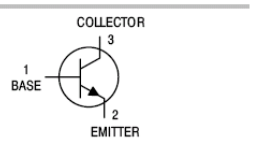
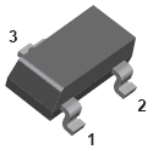
Silicon Epitaxial Planar Transistor 2SC1654

FEATURES

- High DC current gain:h_{FE}=130(Typ) (V_{CE}=3V,I_C=15mA).
- High voltage.

Lead-free





SOT-23

APPLICATIONS

- Audio frequency general purpose amplifier applications.

ORDERING INFORMATION

Type No.	Marking	Package Code
2SC1654	N5/N6/N7	SOT-23

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	50	mA
P_t	Total Power Dissipation	150	mW
T_j,T_{stg}	Junction and Storage Temperature	-55 to +125	℃

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ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0	180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=130V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			0.1	μA
DC current gain	h_{FE}	V_{CE}=3V,I_C=15mA V_{CE}=3V,I_C=1mA	90 70	200 180	400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=50mA, I_B=5mA		0.1	0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=50mA, I_B=5mA		0.73	1	V
Transition frequency	f_T	V_{CE}=10V, I_E=- 10mA		120		MHz
Output capacitance	C_{ob}	V_{CB}=10V, I_E=0,f=1MHz		2.3		pF

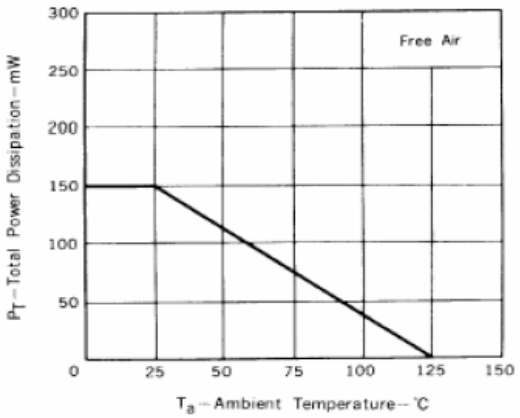
CLASSIFICATION OF $h_{FE(1)}$

Range	90-180	135-270	200-400
Marking	N5	N6	N7

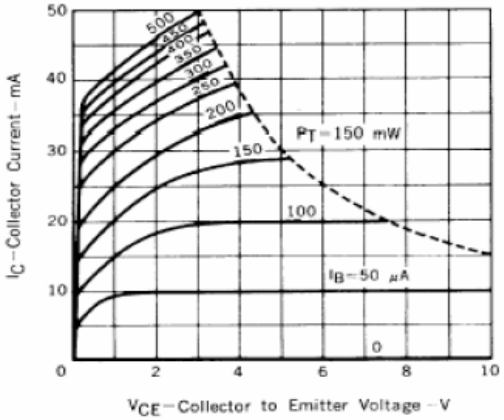
Silicon Epitaxial Planar Transistor **2SC1654**

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

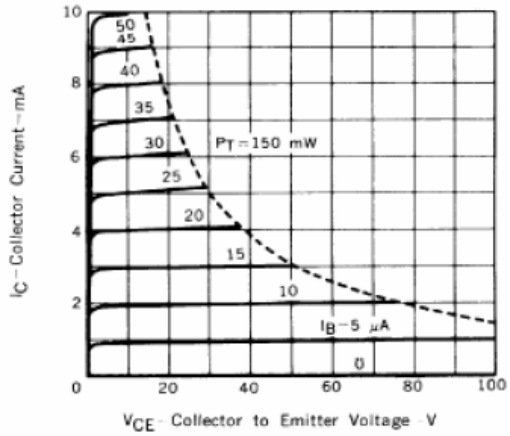
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



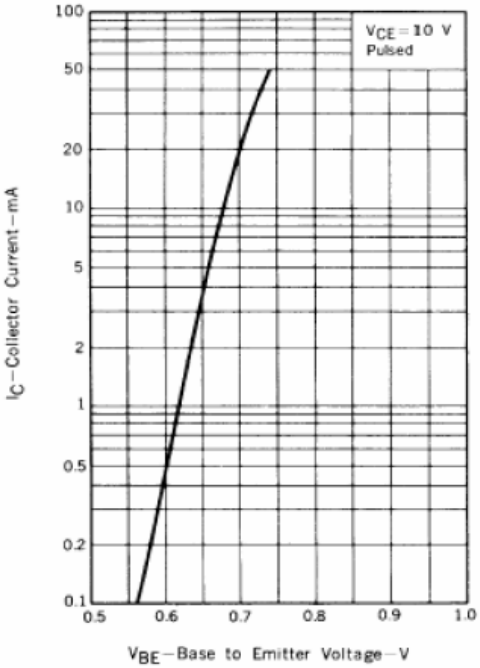
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



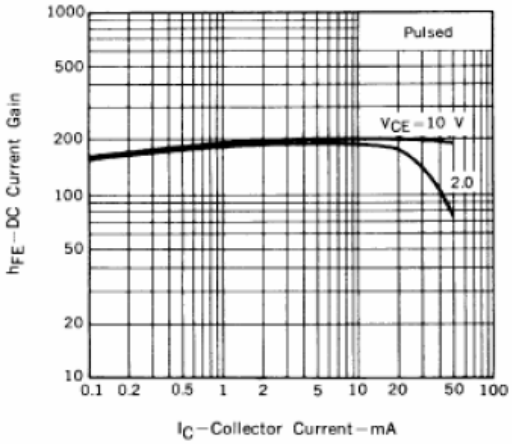
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



DC CURRENT GAIN vs. COLLECTOR CURRENT



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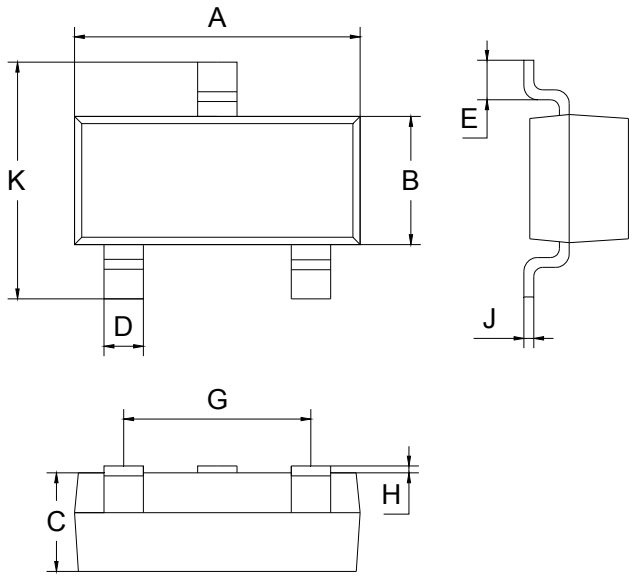
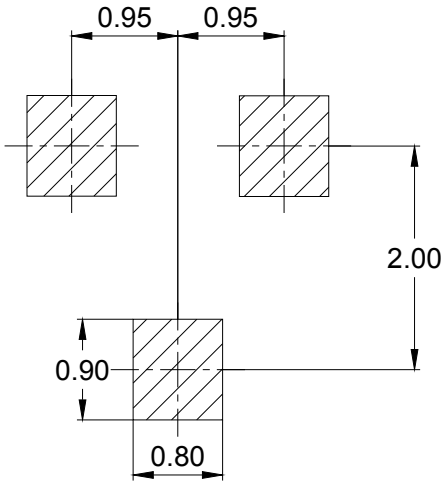
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	1.0 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.1 Typical	
K	2.20	2.60
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
2SC1654	SOT-23	3000/Tape&Reel