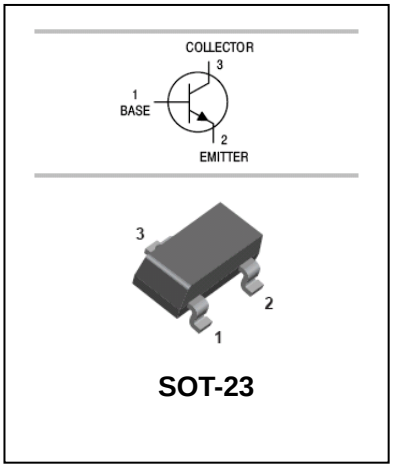
Silicon Epitaxial Planar Transistor **2SD596**

FEATURES

Lead-free

- Micro package.
- Complementary to 2SB624 PNP Transistor.
- High DC current gain h_{FE}:200TYP.(V_{CE}=1.0V,I_C=100mA)



SOT-23

APPLICATIONS

- Audio frequency general purpose amplifier applications.

ORDERING INFORMATION

Type No.	Marking	Package Code
2SD596	DV1/DV2/DV3/DV4/DV5	SOT-23

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	**Parameter**	**Value**	**Units**
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	700	mA
P_C	Collector Dissipation	200	mW
T_j,T_{stg}	Junction and Storage Temperature	-55~150	℃

Silicon Epitaxial Planar Transistor **2SD596**

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	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=30V,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}=1V,I_C=100mA V_{CE}=1V,I_C=700mA	110 50	200	400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=700mA, I_B=70mA		0.22	0.6	V
Base to Emitter voltage	V_{BE}	V_{CE}=6V,I_C=10mA	600	640	700	mV
Transition frequency	f_T	V_{CE}=6V, I_E= -10mA	170			MHz
Output capacitance	C_{ob}	V_{CB}=6V, I_E=0,f=10kHz		12		pF

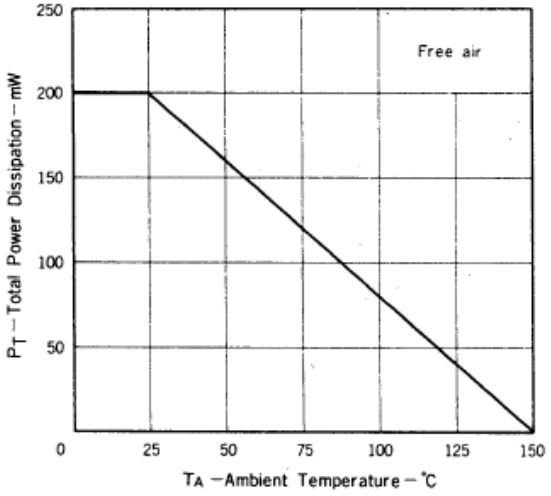
CLASSIFICATION OF $h_{FE(1)}$

Range	110-180	135-220	170-270	200-320	250-400
Marking	DV1	DV2	DV3	DV4	DV5

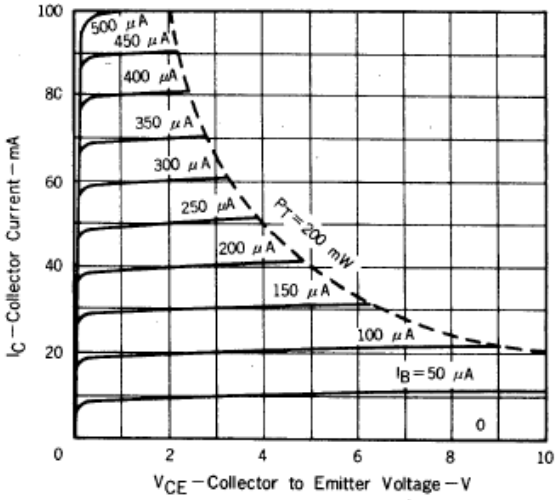
TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Silicon Epitaxial Planar Transistor **2SD596**

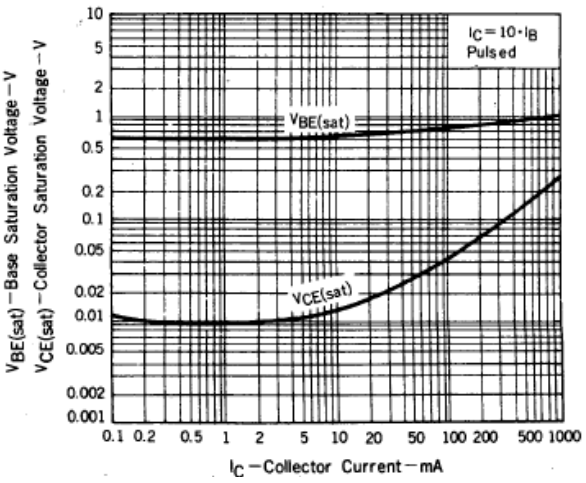
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



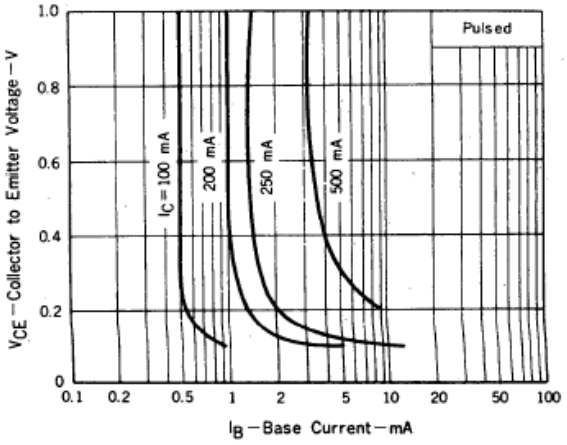
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



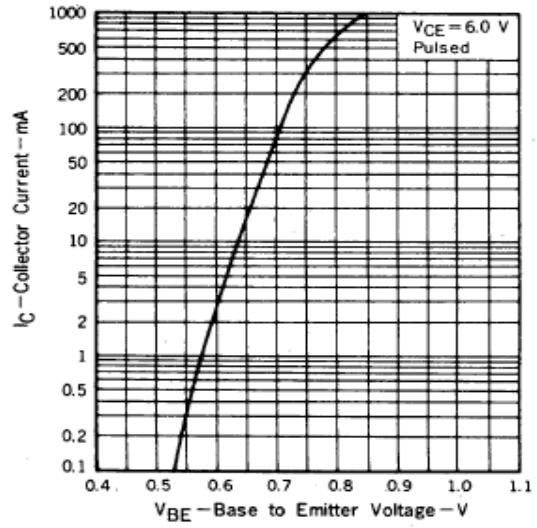
COLLECTOR AND BASE SATURATION VOLTAGE vs. COLLECTOR CURRENT



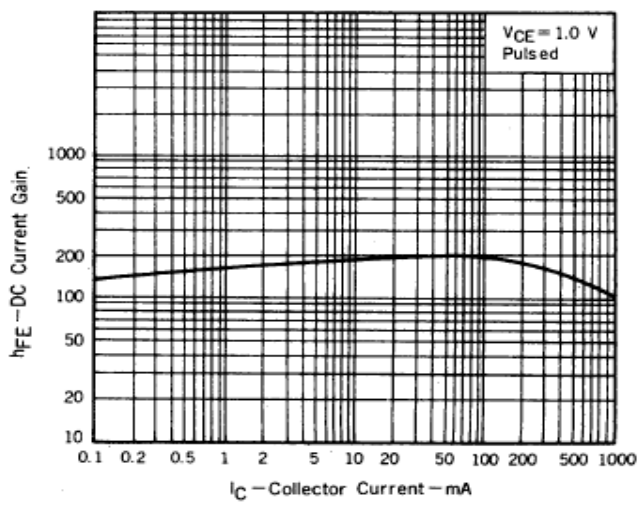
COLLECTOR TO EMITTER VOLTAGE vs. BASE CURRENT



COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



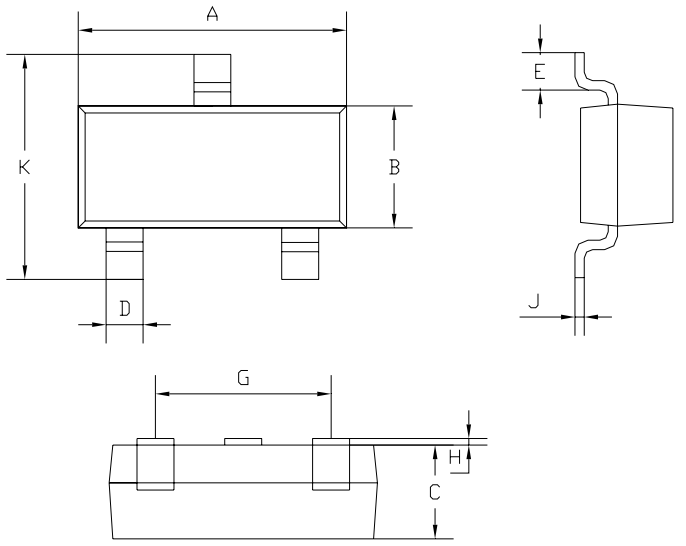
DC CURRENT GAIN vs. COLLECTOR CURRENT



Silicon Epitaxial Planar Transistor **2SD596**

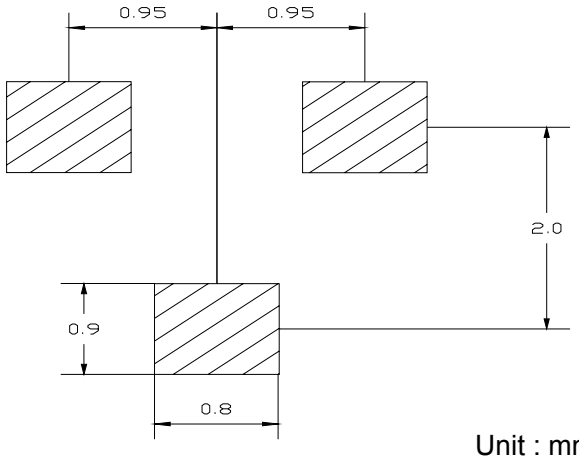
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1Typical	
K	2.35	2.45
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
2SD596	SOT-23	3000/Tape&Reel