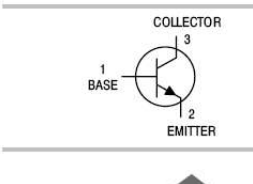
Silicon Epitaxial Planar Transistor 2SD2142

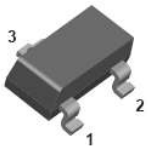
FEATURES

- Darlington connection for a high H_{fe}
- High input impedance

APPLICATIONS

- General purpose amplifiers.





SOT-23

ORDERING INFORMATION

Type No.	Marking	Package Code
2SD2142	R1M	SOT-23

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	32	V
V_{EBO}	Emitter-Base Voltage	12	V
I_C	Collector Current -Continuous	300	mA
P_C	Collector Dissipation	200	mW
T_j,T_{stg}	Junction and Storage Temperature	-55 to +150	℃

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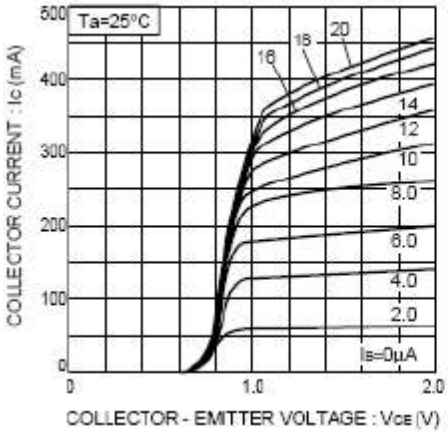
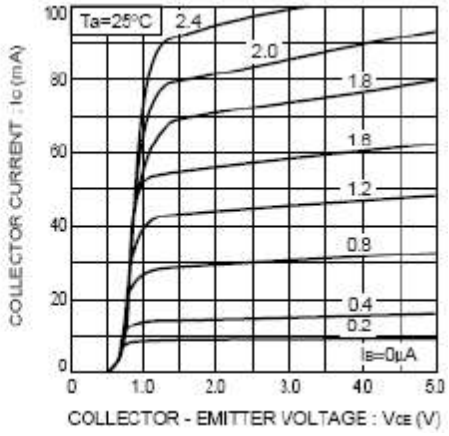
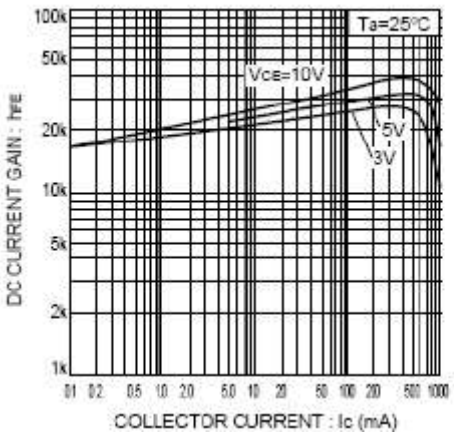
ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

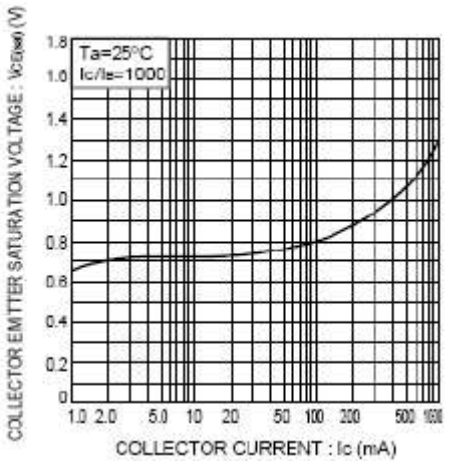
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0	40	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA,I_B=0	32	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA,I_C=0	12	-	-	V
Collector cut-off current	I_{CBO}	V_{CB}=30V,I_E=0	-	-	0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=12V,I_C=0	-	-	0.1	μA
DC current gain	h_{FE}	V_{CE}=3V,I_C=100mA	5000	-	-	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=200mA, I_B= 0.2mA	-	-	1.4	V
Output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1MHz	-	2.5	-	pF
Transition frequency	f_T	V_{CE}=5V, I_C= 10mA f=100MHz	-	200	-	MHz

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified









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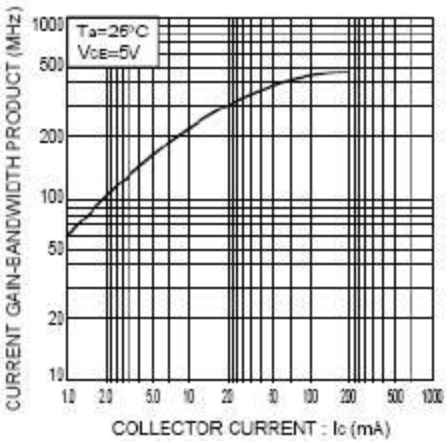
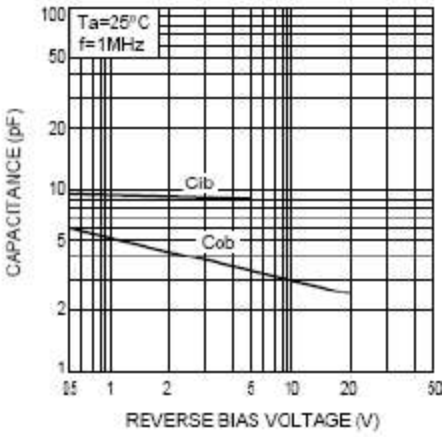
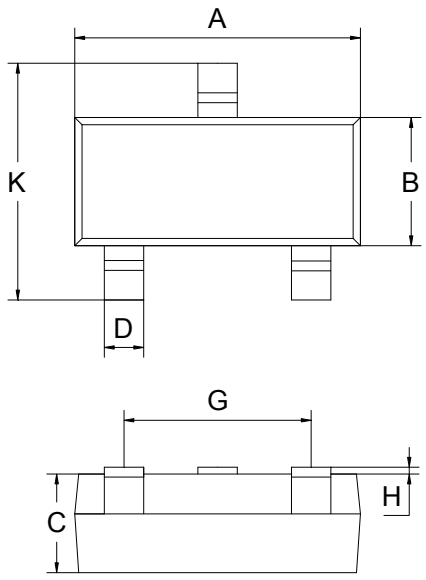




PACKAGE OUTLINE

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		

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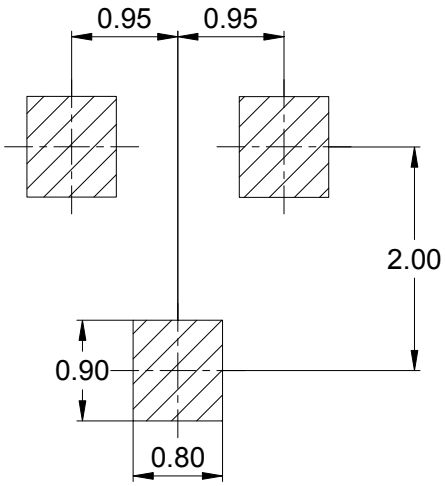
SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
2SD2142	SOT-23	3000/Tape&Reel