

Silicon Epitaxial Planar Transistor

2SD2142

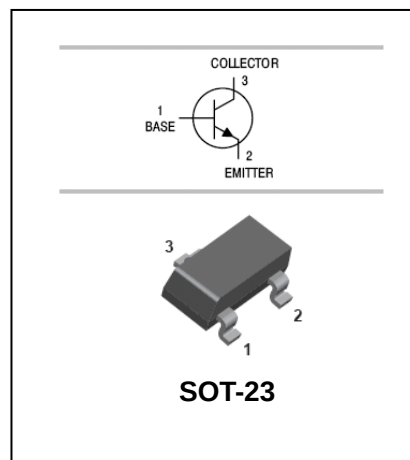
FEATURES

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



APPLICATIONS

- General purpose amplifiers.



ORDERING INFORMATION

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

MAXIMUM RATING @ $T_a=25^\circ\text{C}$ 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	$^\circ\text{C}$



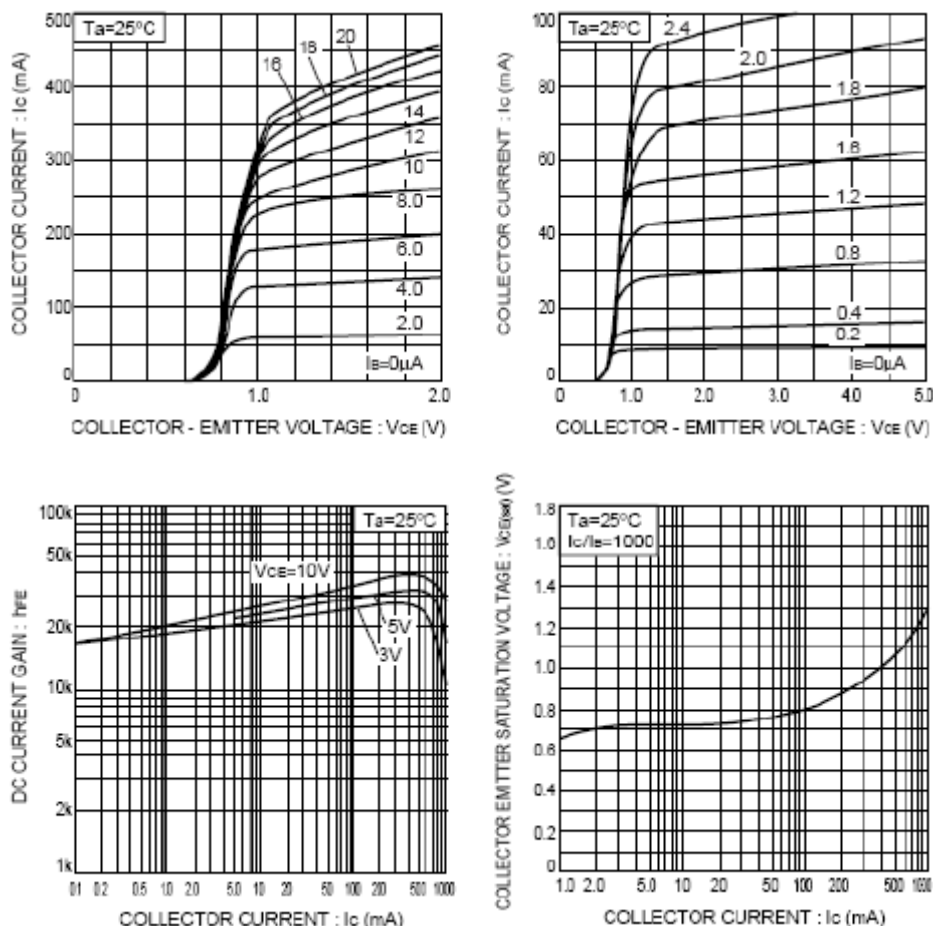
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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

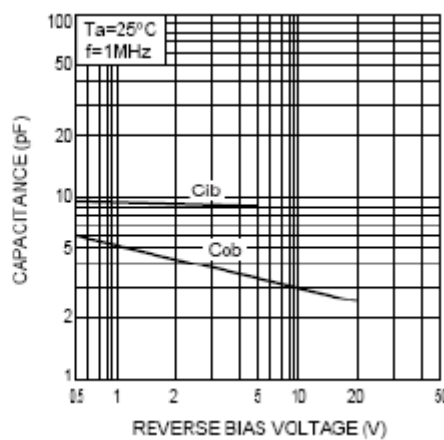
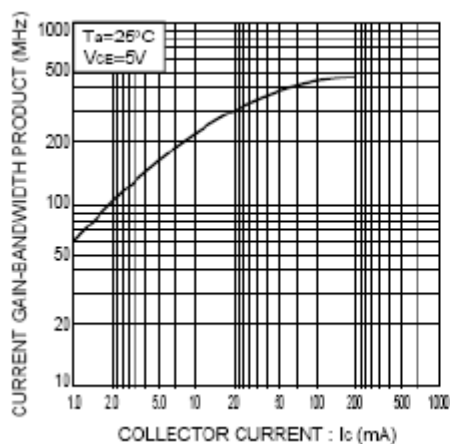
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	40	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	32	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	12	-	-	V
Collector cut-off current	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°C unless otherwise specified



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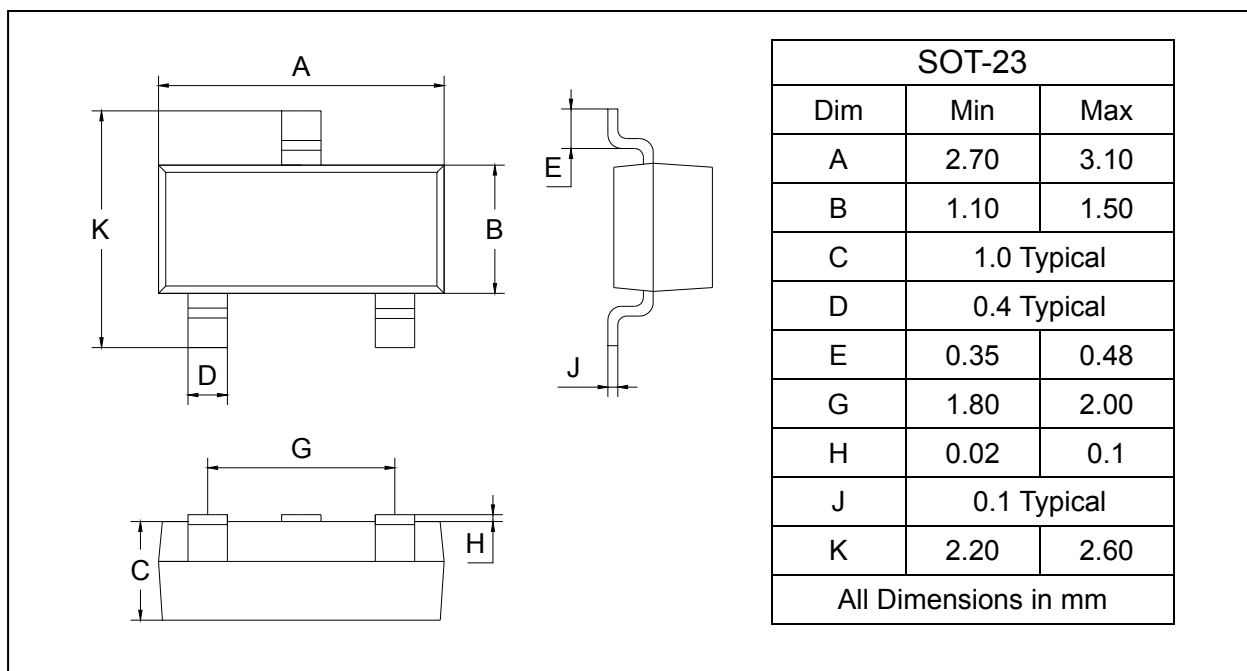
2SD2142



PACKAGE OUTLINE

Plastic surface mounted package

SOT-23

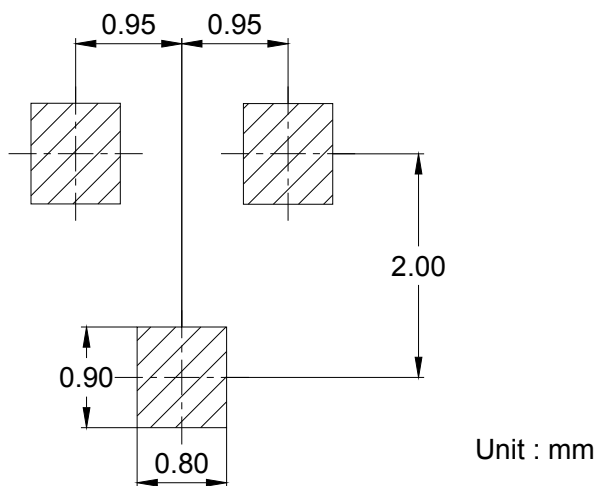




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SOLDERING FOOTPRINT



PACKAGE INFORMATION

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