



Micro Commercial Components



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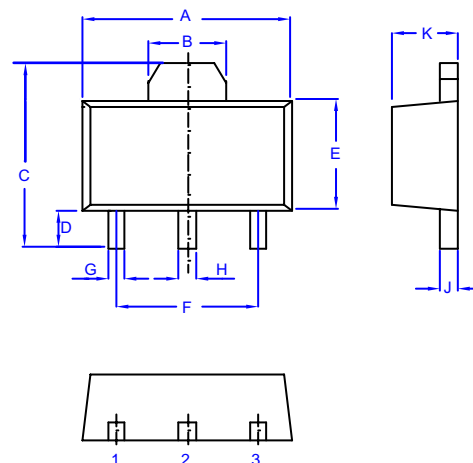
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2SD1664

NPN Epitaxial Planar Silicon Transistors

SOT-89



1. Base
2. Collector
3. Emitter

DIMENSINS					
DIM	INCHES		MM		NOTES
	MIN	MAX	MIN	MAX	
A	.173	.181	4.39	4.60	
B	.061	----	1.55	----	REF.
C	.154	.165	3.91	4.25	
D	.031	.039	0.80	1.00	
E	.092	.100	2.34	2.54	
F	.118	----	3.00	----	TYP
G	.013	.019	0.33	0.48	
H	.015	.021	0.38	0.53	
J	.015	.016	0.38	0.41	
K	.055	.063	1.40	1.60	

Features

- Halogen free available upon request by adding suffix "-HF"
- Complements to 2SB1132
- Low collector-to-emitter saturation voltage.
- Fast switching speed.
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/Rohs Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	32	V
V_{CBO}	Collector-Base Voltage	40	V
V_{EBO}	Emitter-Base Voltage	5.0	V
I_C	Collector Current	1.0	A
P_C	Collector dissipation	500	mW
T_J	Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
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OFF CHARACTERISTICS

$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=50\mu A$, $I_E=0$)	40	---	---	Vdc
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=1.0mA$)	32	---	---	Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage ($I_E=50\mu A$, $I_C=0$)	5.0	---	---	Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB}=20Vdc$, $I_E=0$)	---	---	0.5	μA
I_{EBO}	Emitter Cutoff Current ($V_{EB}=4.0Vdc$, $I_C=0$)	---	---	0.5	μA

ON CHARACTERISTICS

h_{FE-1}	DC Current Gain ($I_C=100mA$, $V_{CE}=3.0Vdc$)	82	---	390	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=0.5A$, $I_B=50mA$)			0.4	Vdc
f_T	Gain-Bandwidth product ($V_{CE}=5V$, $I_C=50mA$, $f=100MHz$)	---	150	---	MHz
C_{ob}	Out Capacitance ($V_{CB}=10V$, $f=1.0MHz$, $I_E=0$)	---	15	---	pF

$h_{FE(1)}$ CLASSIFICATION

Rank	P	Q	R
Range	82-180	120-270	180-390
Marking	DAP	DAQ	DAR

Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 1Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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