Micro Commercial Components

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2SD1005-W
2SD1005-V
2SD1005-U

NPN Silicon Power Transistors

Features

- Halogen free available upon request by adding suffix "-HF"
- Excellent DC Current Gain Linearity
- High Breakdown Voltage
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1

Maximum Ratings

Symbol	Rating	Value	Unit
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5.0	V
I_C	Collector Current,	1.0	A
P_C	Collector Power Dissipation	0.5	W
R_{thJA}	Thermal Resistance From Junction To Ambient	250	°C/W
T_J	Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

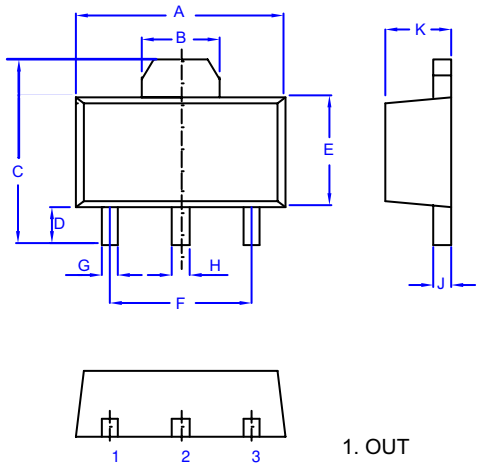
Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
OFF CHARACTERISTICS					
V_{CEO}	Collector-Emitter Breakdown Voltage (I_C=1.0mAdc,I_B=0)	80	---	---	Vdc
V_{CBO}	Collector-Base Breakdow n Voltage (I_C=0.1mAdc,I_E=0)	100	---	---	Vdc
V_{EBO}	Emitter-Base Breakdown Voltage (I_E=0.1mAdc,I_C=0,)	5.0	---	---	Vdc
I_{CBO}	Collector Cutoff Current (V_{CB}=100Vdc,I_E=0)	---	---	0.1	µAdc
I_{EBO}	Emitter Cutoff Current (V_{EB}=5.0Vdc, I_C=0)	---	---	0.1	µAdc
h_{FE}	DC Current Transfer Ratio (V_{CE}=2.0Vdc, I_C=0.1Adc) (V_{CE}=2.0Vdc, I_C=0.5Adc)	90 25	--- ---	400 ---	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C/I_B=500mA/50mA)	---	---	0.5	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage (I_C/I_B=500mA/50mA)	---	---	1.5	Vdc
f_T	Transition Frequency (V_{CE}=5Vdc, I_C=10mAdc)	---	160	---	MHz
C_{ob}	Output Capacitance (V_{CB}=10Vdc, I_E=0, f=1.0MHz)	---	12	---	pF

CLASSIFICATION OF h_{FE}

Rank	W	V	U
Range	90-180	135-270	200-400
Marking	BW	BV	BU

SOT-89



1. OUT
2. GND
3. IN

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	

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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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