



BCW66F

NPN Small Signal Transistor 200mW

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Ideally Suited for Automatic Insertion
- 150°C Junction Temperature
- Low Current, Low Voltage
- Epitaxial Planar Die Construction
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

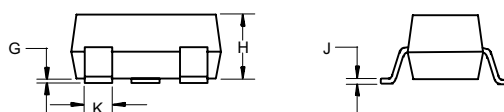
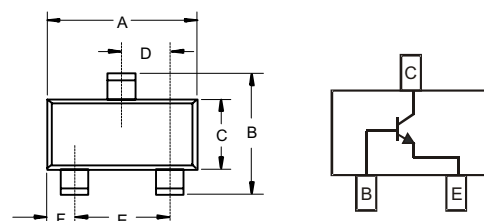
Mechanical Data

- Case: SOT-23
- Terminals: Solderable per MIL-STD-202, Method 208
- Marking: EF

Maximum Ratings @ 25°C Unless Otherwise Specified

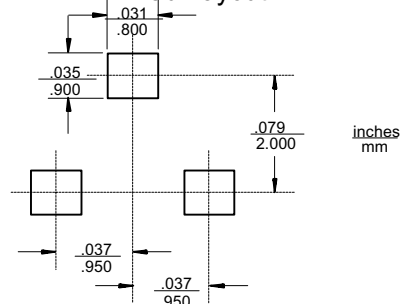
Charateristic	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	45	V
Collector-Base Voltage	V_{CBO}	75	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current(DC)	I_C	800	mA
Collector Power Dissipation	P_d	200	mW
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	625	°C/W
Operating & Storage Temperature	T_j, T_{STG}	-55~150	°C

SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout



Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Min.	TYP.	Max.	Unit
DC Current Gain ⁽¹⁾					
at $V_{CE} = 10V$, $I_C = 100\mu A$	h_{FE}	35	—	—	—
at $V_{CE} = 1V$, $I_C = 10mA$	h_{FE}	75	—	—	—
at $V_{CE} = 1V$, $I_C = 100mA$	h_{FE}	100		250	—
at $V_{CE} = 2V$, $I_C = 500mA$	h_{FE}	35			
Collector-Emitter Saturation Voltage					
at $I_C = 100mA$, $I_B = 10mA$	V_{CEsat}	—	—	0.3	V
at $I_C = 500mA$, $I_B = 50mA$	V_{CEsat}	—	—	0.7	V
Base-Emitter Saturation Voltage					
at $I_C = 500mA$, $I_B = 50mA$	V_{BEsat}	—	—	2	V
Collector-Emitter Breakdown Voltage					
at $I_C = 10mA$, $I_B = 0$	$V_{(BR)CEO}$	45	—	—	V
Collector-Base Breakdown Voltage					
at $I_C = 10\mu A$, $I_B = 0$	$V_{(BR)CBO}$	75	—	—	V
Emitter-Base Breakdown Voltage					
at $I_E = 10\mu A$, $I_C = 0$	$V_{(BR)EBO}$	5	—	—	V
Collector-Base Cut-off Current					
at $V_{CB} = 45V$, $I_E = 0$	I_{CBO}	—	—	20	nA
Emitter-Base Cut-off Current					
at $V_{EB} = 4V$, $I_C = 0$	I_{EBO}	—	—	20	nA
Gain-Bandwidth Product					
at $V_{CE} = 10V$, $I_C = 20mA$, $f = 100MHz$	f_T	100	—	—	MHz
Output Capacitance					
at $V_{CB} = 10V$, $I_E = 0$, $f = 1MHz$	C_{ob}	—	—	12	pF
Input Capacitance					
at $V_{EB} = 0.5V$, $I_E = 0$, $f = 1MHz$	C_{ib}	—	—	80	pF

Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

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

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