



Micro Commercial Components



Micro Commercial Components  
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# 2SD1138-B 2SD1138-C

## Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Low Frequency Power Amplifier Color TV Vertical Deflection Output
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

## NPN Silicon Power Transistors

## Maximum Ratings

Symbol	Rating	Rating	Unit
$V_{CE0}$	Collector-Emitter Voltage	150	V
$V_{CB0}$	Collector-Base Voltage	200	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current	2	A
$P_C$	Collector power dissipation	1.8	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	Type	Max	Units
<b>OFF CHARACTERISTICS</b>					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=50\text{mAdc}$ , $I_B=0$ )	150	---	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=5\text{mAdc}$ , $I_E=0$ )	200	---	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=5\text{mAdc}$ , $I_C=0$ )	6	---	---	Vdc
$I_{CBO}$	Collector-Base Cutoff Current ( $V_{CB}=120\text{Vdc}$ , $I_E=0$ )	---	---	1.0	$\mu\text{Adc}$
$I_{EBO}$	Emitter-Base Cutoff Current ( $V_{EB}=5\text{Vdc}$ , $I_C=0$ )	---	---	1.0	$\mu\text{Adc}$

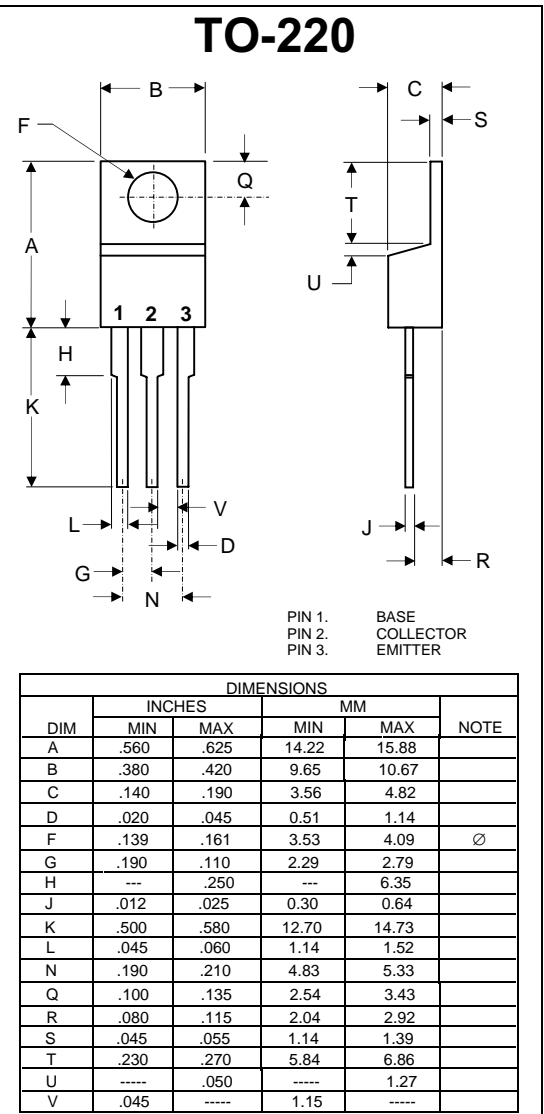
## ON CHARACTERISTICS

$h_{FE}$	Forward Current Transfer ratio ( $I_C=50\text{mAdc}$ , $V_{CE}=4\text{Vdc}$ ) ( $I_C=500\text{mAdc}$ , $V_{CE}=10\text{Vdc}$ )	60	---	200	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=500\text{mAdc}$ , $I_B=50\text{mAdc}$ )	---	---	3	Vdc
$V_{BE}$	Base-Emitter Voltage ( $I_C=50\text{mAdc}$ , $V_{CE}=4\text{Vdc}$ )	---	---	1	Vdc
$C_{ob}$	Collector Output Capacitance ( $V_{CB}=10\text{Vdc}$ , $I_E=0$ , $f=1\text{MHz}$ )	---	30	---	pF

## Classification OF $h_{FE}$

Rank	B	C
Range	60~120	100-200

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.





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### Ordering Information :

Device	Packing
Part Number-BP	Bulk; 1Kpcs/Box

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

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