



Micro Commercial Components



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**2SD880-Q**  
**2SD880-Y**  
**2SD880-GR**

## 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)
- Power amplifier applications
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

## Maximum Ratings

- Mounting Torque: 5 in-lbs Maximum

Symbol	Rating	Rating	Unit
V <sub>CEO</sub>	Collector-Emitter Voltage	60	V
V <sub>CBO</sub>	Collector-Base Voltage	60	V
V <sub>EBO</sub>	Emitter-Base Voltage	7	V
I <sub>C</sub>	Collector Current	3	A
P <sub>C</sub>	Collector power dissipation	1.5	W
T <sub>J</sub>	Junction Temperature	-55 to +150	°C
T <sub>STG</sub>	Storage Temperature	-55 to +150	°C

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Type	Max	Units
<b>OFF CHARACTERISTICS</b>					
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage (I <sub>C</sub> =50mA, I <sub>B</sub> =0)	60	---	---	Vdc
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage (I <sub>C</sub> =100μA, I <sub>E</sub> =0)	60	---	---	Vdc
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage (I <sub>E</sub> =100μA, I <sub>C</sub> =0)	7	---	---	Vdc
I <sub>CB0</sub>	Collector-Base Cutoff Current (V <sub>CB</sub> =60Vdc, I <sub>E</sub> =0)	---	---	100	μA
I <sub>EBO</sub>	Emitter-Base Cutoff Current (V <sub>EB</sub> =7Vdc, I <sub>C</sub> =0)	---	---	100	μA

## ON CHARACTERISTICS

h <sub>FE</sub>	Forward Current Transfer ratio (I <sub>C</sub> =500mA, V <sub>CE</sub> =5Vdc)	60	---	300	---
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage (I <sub>C</sub> =3A, I <sub>B</sub> =300mA)	---	---	1	Vdc
V <sub>BE</sub>	Base-Emitter Voltage (I <sub>C</sub> =0.5A, V <sub>CE</sub> =5Vdc)	---	---	1	Vdc
f <sub>T</sub>	Transistor Frequency (I <sub>C</sub> =500mA, V <sub>CE</sub> =5Vdc)	---	3	---	MHz
C <sub>ob</sub>	Collector Output Capacitance (V <sub>CB</sub> =10Vdc, I <sub>E</sub> =0, f=1MHz)	---	70	---	pF
t <sub>on</sub>	Turn on time	---	0.8	---	μs
t <sub>s</sub>	Storage time	---	1.5	---	μs
t <sub>f</sub>	Fall time	---	0.8	---	μs

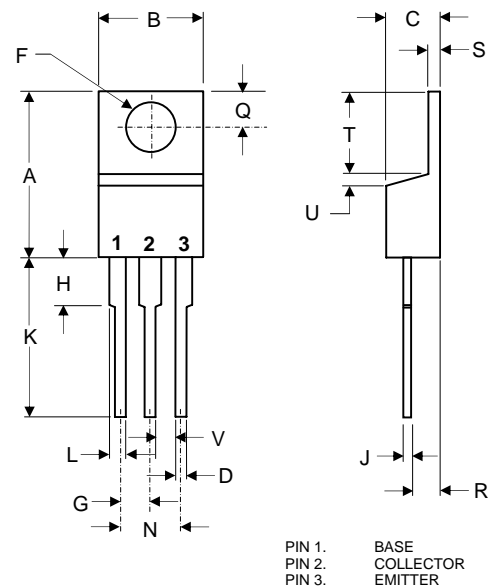
## Classification OF h<sub>FE</sub>T

Rank	Q	Y	GR
Range	60-120	100-200	150-300

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

## NPN Silicon Power Transistors

### TO-220



DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.560	.625	14.22	15.88	
B	.380	.420	9.65	10.67	
C	.140	.190	3.56	4.82	
D	.020	.045	0.51	1.14	
F	.139	.161	3.53	4.09	∅
G	.190	.110	2.29	2.79	
H	---	.250	---	6.35	
J	.012	.025	0.30	0.64	
K	.500	.580	12.70	14.73	
L	.045	.060	1.14	1.52	
N	.190	.210	4.83	5.33	
Q	.100	.135	2.54	3.43	
R	.080	.115	2.04	2.92	
S	.045	.055	1.14	1.39	
T	.230	.270	5.84	6.86	
U	---	.050	---	1.27	
V	.045	---	1.15	---	

### Ordering Information :

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

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

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