

**Micro Commercial Components** 



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# **Features**

- Halogen free available upon request by adding suffix "-HF"
- Complement to 2SA2029
- 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 @ 25°C Unless Otherwise Specified

Symbol	Rating	Rating	Unit
$V_{CEO}$	Collector-Emitter Voltage	50	V
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	7	V
Ic	Collector Current-Continuous	150	mA
Pc	Collector Dissipation	100	mW
TJ	Operating Junction Temperature	-55 to +150	$^{\circ}$
T <sub>STG</sub>	Storage Temperature	-55 to +150	$^{\circ}\mathbb{C}$

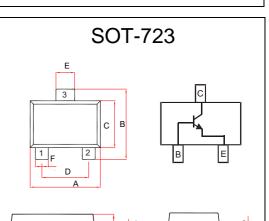
# Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Тур	Max	Units
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage (I <sub>C</sub> =1mAdc, I <sub>B</sub> =0)	50			Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I <sub>C</sub> =50µAdc, I <sub>E</sub> =0)	60	-		Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage (I <sub>E</sub> =50µAdc, I <sub>C</sub> =0)	7			Vdc
I <sub>CBO</sub>	Collector Cutoff Current (V <sub>CB</sub> =60Vdc, I <sub>E</sub> =0Vdc)			0.1	μ Adc
I <sub>EBO</sub>	Emitter Cutoff Current (V <sub>EB</sub> =7Vdc, I <sub>C</sub> =0Vdc)			0.1	μ Adc
h <sub>FE</sub>	DC Current Gain (I <sub>C</sub> =1mAdc, V <sub>CE</sub> =6Vdc)	120		560	
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage (I <sub>C</sub> =50mAdc, I <sub>B</sub> =5mAdc)		-	0.4	Vdc
f <sub>T</sub>	Transition Frequency (V <sub>CE</sub> =12Vdc, I <sub>C</sub> =2mAdc, f=100MHz)		180		MHz
C <sub>ob</sub>	Output Capacitance (V <sub>CB</sub> =12Vdc, f=1.0MHz, I <sub>E</sub> =0)			3.5	pF

## Classification OF her

Rank	Q	R	S
Range	120-270	180-390	270-560
Marking	BQ	BR	BS

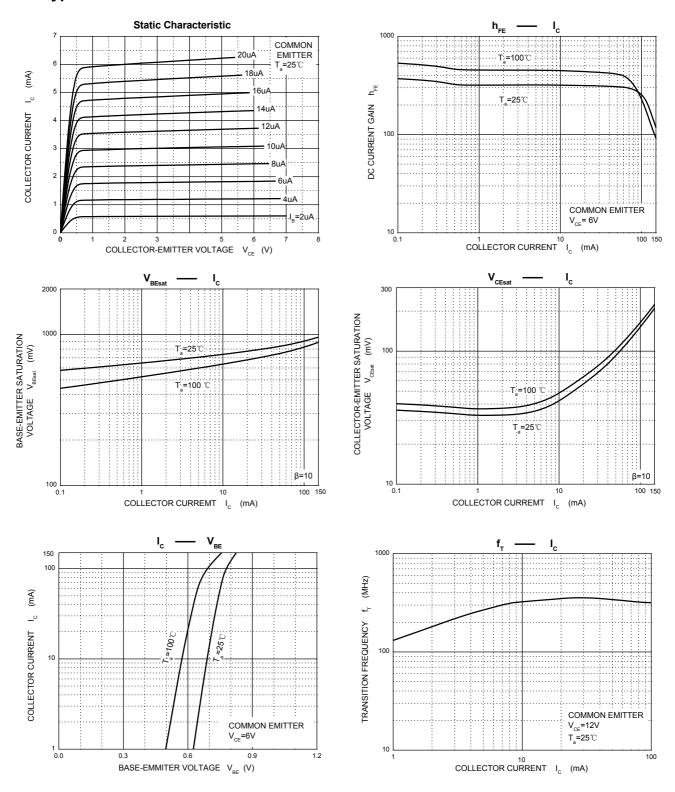
# NPN General Purpose Transistors



	INCHES		ММ		
DIM	MIN	MAX	MIN	MAX	NOTE
Α	. 045	.049	1.15	1.25	
В	. 045	.049	1.15	1.25	
С	. 0 30	.033	0.75	0.85	
D	.03	B1TYP.	0.	80TYP.	
Е	.011	.015	0.27	0.37	
F	.007	.011	0.17	0.27	
G	.000	.002	.000	.050	
Н	.017	.020	0.43	0.50	
J	.003	.006	.080	.150	

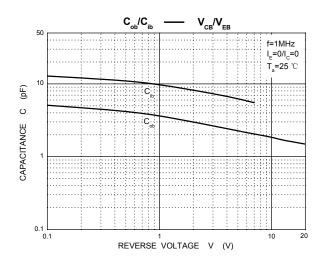


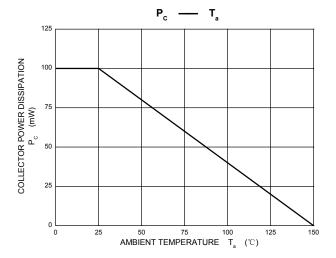
# **Typical Characteristics**





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# **Ordering Information:**

Device	Packing
Part Number-TP	Tape&Reel 8Kpcs/Reel

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

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