



Micro Commercial Components



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**2SC2412-Q
2SC2412-R
2SC2412-S**

**NPN Silicon
Epitaxial Transistors**

Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Power Dissipation: 0.2W ($T_A=25^\circ\text{C}$)
- Collector Current: 0.15A
- Collector-base Voltage: 60V
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{CE0}	Collector-Emitter Voltage	50	V
V_{CB0}	Collector-Base Voltage	60	V
V_{EB0}	Emitter-Base Voltage	7.0	V
I_C	Collector Current	0.15	A
P_C	Collector power dissipation	0.2	W
T_J	Junction Temperature	-55 to +150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 to +150	$^\circ\text{C}$

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
OFF CHARACTERISTICS					
V_{CE0}	Collector-Emitter Voltage ($I_C=1.0\text{mA}$, $I_B=0$)	50	---	---	Vdc
V_{CB0}	Collector-Base Voltage ($I_C=50\mu\text{A}$, $I_E=0$)	60	---	---	Vdc
V_{EB0}	Emitter-Base Voltage ($I_E=50\mu\text{A}$, $I_C=0$)	7.0	---	---	Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB}=60\text{Vdc}$, $I_E=0$)	---	---	0.1	μA
I_{EBO}	Emitter Cutoff Current ($V_{EB}=7.0\text{Vdc}$, $I_C=0$)	---	---	0.1	μA

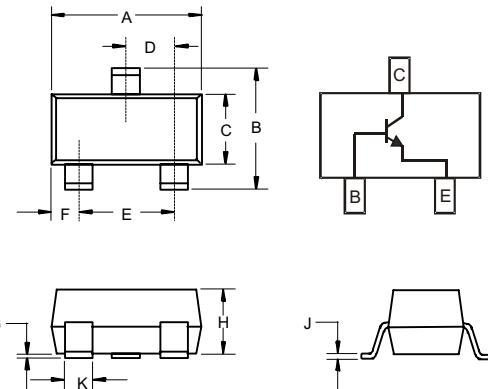
ON CHARACTERISTICS

h_{FE}	DC Current Gain ($I_C=1.0\text{mA}$, $V_{CE}=6.0\text{Vdc}$)	120	---	560	---
$V_{CE(sat)}$	Collector Saturation Voltage ($I_C=50\text{mA}$, $I_B=5.0\text{mA}$)	---	---	0.4	Vdc
f_T	Transition Frequency ($V_{CE}=12\text{Vdc}$, $I_C=2.0\text{mA}$, $f=100\text{MHz}$)	150	---	---	MHz

CLASSIFICATION OF h_{FE}

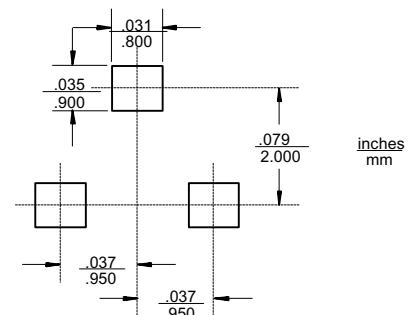
Rank	Q	R	S
Range	120-270	180-390	270-560
Marking	BQ	BR	BS

SOT-23



DIM	DIMENSIONS				NOTE
	INCHES		MM		
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**





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Ordering Information :

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

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

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