



Micro Commercial Components



Micro Commercial Components  
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# KSD1408-Y

## NPN Silicon Power Transistors

### Features

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Halogen free available upon request by adding suffix "-HF"

### Maximum Ratings

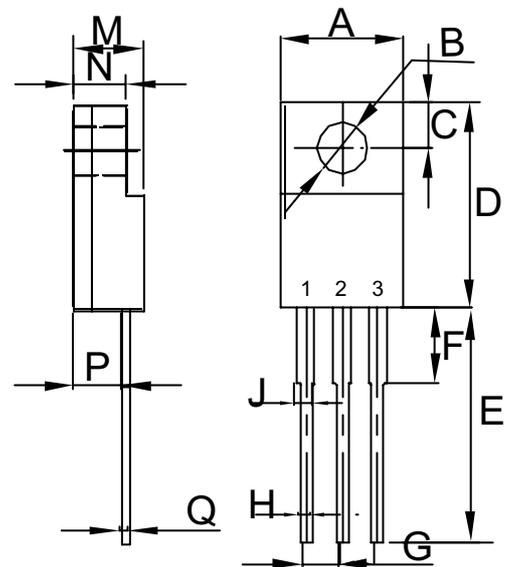
Symbol	Rating	Rating	Unit
$V_{CEO}$	Collector-Emitter Voltage	80	V
$V_{CBO}$	Collector-Base Voltage	80	V
$V_{EBO}$	Emitter-Base Voltage	5.0	V
$I_C$	Collector Current	4.0	A
$P_C$	Collector power dissipation	2.0	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	62.5	$^{\circ}C/W$
$T_J$	Junction Temperature	-55 to +150	$^{\circ}C$
$T_{STG}$	Storage Temperature	-55 to +150	$^{\circ}C$

### Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=0.1mA_{dc}$ , $I_E=0$ )	80	---	---	Vdc
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=50mA_{dc}$ , $I_B=0$ )	80	---	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=100\mu A_{dc}$ , $I_C=0$ )	5.0	---	---	Vdc
$I_{CBO}$	Collector-Base Cutoff Current ( $V_{CB}=80V_{dc}$ , $I_E=0$ )	---	---	30	$\mu A_{dc}$
$I_{EBO}$	Emitter-Base Cutoff Current ( $V_{EB}=5.0V_{dc}$ , $I_C=0$ )	---	---	100	$\mu A_{dc}$
$h_{FE}$	DC Current Gain ( $I_C=0.5A_{dc}$ , $V_{CE}=5.0V_{dc}$ ) ( $I_C=3.0A_{dc}$ , $V_{CE}=5.0V_{dc}$ )	120	---	240	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=3.0A_{dc}$ , $I_B=0.3A_{dc}$ )	---	---	1.5	Vdc
$V_{BE}$	Base-Emitter Voltage ( $V_{CE}=5.0V_{dc}$ , $I_C=3.0A_{dc}$ )	---	---	1.5	Vdc
$f_T$	Transition Frequency ( $V_{CE}=5V_{dc}$ , $I_C=0.5A_{dc}$ )	---	8	---	MHz
$C_{ob}$	Collector output capacitance ( $V_{CB}=10V_{dc}$ , $I_E=0$ , $f=1MHz$ )	---	90	---	MHz

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

### TO-220F



PIN 1. BASE  
 PIN 2. COLLECTOR  
 PIN 3. EMITTER

DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.392	.408	9.96	10.36	
B	.138		3.50		$\phi$
C	.106		2.70		
D	.583	.598	14.80	15.20	
E	.520		13.20		
F	.102	.118	2.60	3.00	
G	.100		2.54		
H	.020	.030	0.50	0.75	
J	.043	.053	1.10	1.35	
M	.169	.185	4.30	4.70	
N	.110	.126	2.80	3.20	
P	.098	.114	2.50	2.90	
Q	.020	.030	0.50	0.75	



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### Ordering Information :

Device	Packing
Part Number-BP	Bulk;5Kpcs/Box

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

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