



Micro Commercial Components



Micro Commercial Components
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2SD669(A)
2SD669(A)-B
2SD669(A)-C
2SD669-D

Features

- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Capable of 1 Watts of Power Dissipation.
- Collector-current 1.5A
- Collector-base Voltage 180V
- Operating and storage junction temperature range: -55°C to +150°C
- Halogen free available upon request by adding suffix "-HF"

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=10\text{mA}$, $I_E=0$)	2SD669 2SD669A	120 160	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=1\text{mA}$, $I_E=0$)		180	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E=1\text{mA}$, $I_C=0$)		5.0	---	Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB}=160\text{Vdc}$, $I_E=0$)		---	10	μA
I_{EBO}	Emitter Cutoff Current ($V_{EB}=4\text{Vdc}$, $I_C=0$)		---	10	μA

ON CHARACTERISTICS

h_{FE-1}	DC Current Gain ($I_C=150\text{mA}$, $V_{CE}=5\text{Vdc}$)	2SD669 2SD669A	60 60	320 200	---
h_{FE-2}	DC Current Gain ($I_C=500\text{mA}$, $V_{CE}=5\text{Vdc}$)		30	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=500\text{mA}$, $I_E=50\text{mA}$)		---	1.0	Vdc
V_{BE}	Base-Emitter Saturation Voltage ($V_{CE}=5\text{Vdc}$, $I_C=150\text{mA}$)		---	1.5	Vdc
f_T	Transition Frequency ($V_{CE}=5\text{Vdc}$, $I_C=150\text{mA}$)		140(TYP)		MHz
C_{ob}	Collector output capacitance ($V_{CB}=10\text{Vdc}$, $I_E=0$, $f=1\text{MHz}$)		14(TYP)		pF

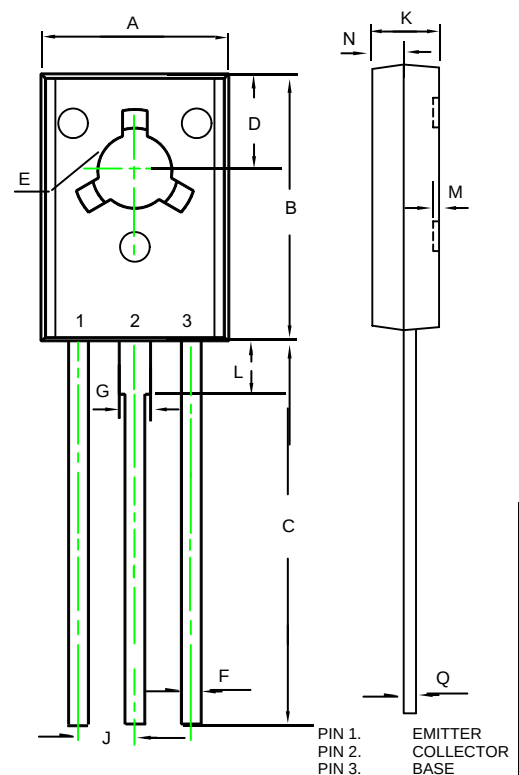
CLASSIFICATION OF H_{FE}

Rank	B	C	D
Range 2SD669	60-120	100-200	160-320
2SD669A	60-120	100-200	

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

NPN Silicon Plastic-Encapsulate Transistor

TO-18



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.291	0.307	7.40	7.80	
B	0.417	0.433	10.60	11.00	
C	0.602	0.618	15.30	15.70	
D	0.154	0.161	3.90	4.10	
E	0.118	0.126	3.00	3.20	
F	0.026	0.034	0.66	0.86	
G	0.046	0.054	1.17	1.37	
J	0.090TYP		2.290TYP		
K	0.098	0.114	2.50	2.90	
L	0.083	0.091	2.10	2.30	
M	0.000	0.012	0.00	0.30	
N	0.043	0.059	1.10	1.50	
Q	0.018	0.024	0.45	0.60	

www.mccsemi.com

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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