



Micro Commercial Components



Micro Commercial Components  
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## Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/Rohs Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Capable of 1.0Watts of Power Dissipation.
- Collector-current 3.0A
- Collector-base Voltage 120V
- Operating and storage junction temperature range:-55°C to +150°C
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

## 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 ( $I_C=1.0mA$ , $I_B=0$ )	100		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=10\mu A$ , $I_E=0$ )	120		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=10\mu A$ , $I_C=0$ )	6		Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=100Vdc$ , $I_E=0A$ )		1.0	$\mu A$
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=4.0Vdc$ , $I_C=0A$ )		1.0	$\mu A$

### ON CHARACTERISTICS

$h_{FE(1)}$	DC Current Gain* ( $I_C=500mA$ , $V_{CE}=5.0Vdc$ )	70	400	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=1500mA$ , $I_B=150mA$ )		0.4	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ( $I_C=1500mA$ , $I_B=150mA$ )		1.2	Vdc

### SMALL-SIGNAL CHARACTERISTICS

$f_T$	Transistor Frequency ( $I_C=500mA$ , $V_{CE}=10Vdc$ )	180(Typ)	MHz
$C_{OB}$	Collector Output Capacitance ( $V_{CB}=10Vdc$ , $I_E=0$ , $f=1MHz$ )	25(typ)	pF
$t_{on}$	Turn-on time	100(typ)	nS
$t_s$	Storage time	900(typ)	nS
$t_f$	Fall time ( $V_{CC}=50Vdc$ , $I_C=1.5A$ , $I_{B1}=-I_{B2}=-0.15A$ )	50(typ)	nS

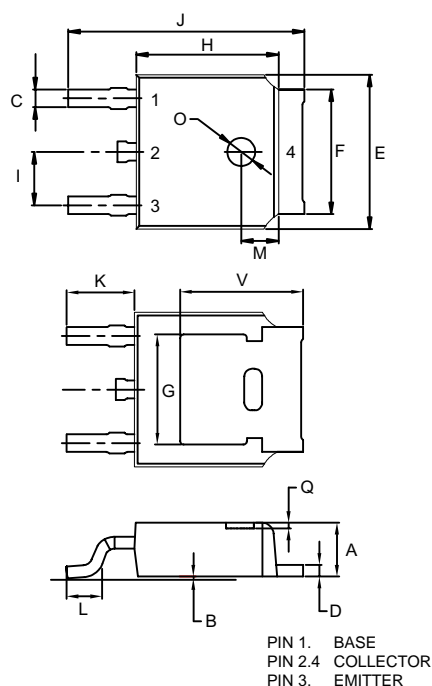
### CLASSIFICATION OF $h_{FE}$

Rank	Q	R	S	T
Range	70-140	100-200	140-280	200-400

**2SD1815-Q**  
**2SD1815-R**  
**2SD1815-S**  
**2SD1815-T**

## NPN Silicon Epitaxial Transistor

### DPAK



### DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.087	0.094	2.20	2.40	
B	0.000	0.005	0.00	0.13	
C	0.026	0.034	0.66	0.86	
D	0.018	0.023	0.46	0.58	
E	0.256	0.264	6.50	6.70	
F	0.201	0.215	5.10	5.46	
G	0.190		4.83		
H	0.236	0.244	6.00	6.20	
I	0.086	0.094	2.18	2.39	
J	0.386	0.409	9.80	10.40	
K	0.114		2.90		
L	0.055	0.067	1.40	1.70	
M	0.063		1.60		
O	0.043	0.051	1.10	1.30	
Q	0.000	0.012	0.00	0.30	
V	0.211		5.35		

[www.mccsemi.com](http://www.mccsemi.com)

## Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

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

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