



Micro Commercial Components



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

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	μA
I_{EBO}	Emitter Cutoff Current ($V_{EB}=4.0Vdc, I_C=0A$)		1.0	μA

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

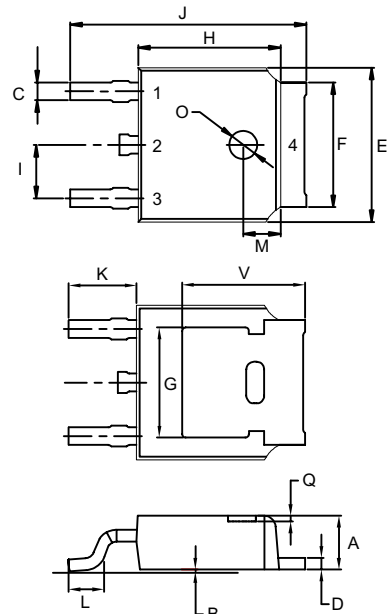
f_T	Transistor Frequency ($I_C=500mA, V_{CE}=10Vdc$)	180(Typ)		MHz
C_{OB}	Collector Output Capacitance ($V_{CB}=10Vdc, I_E=0, f=1MHz$)	25(typ)		pF
t_{on}	Turn-on time	100(typ)		nS
t_s	Storage time	900(typ)		nS
t_f	Fall time ($V_{CC}=50Vdc, I_C=1.5A, I_{B1}=-I_{B2}=-0.15A$)	50(typ)		nS

CLASSIFICATION OF $h_{FE(1)}$

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

NPN Silicon Epitaxial Transistor

DPAK



PIN 1. BASE
 PIN 2.4. COLLECTOR
 PIN 3. EMITTER

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

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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