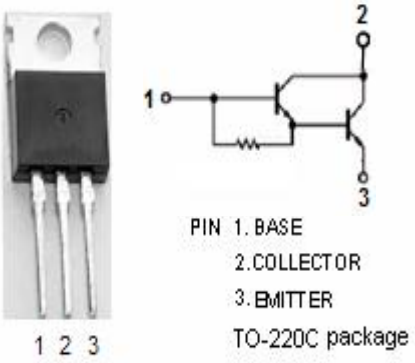
isc Silicon NPN Darlington Power Transistor — 2SD834

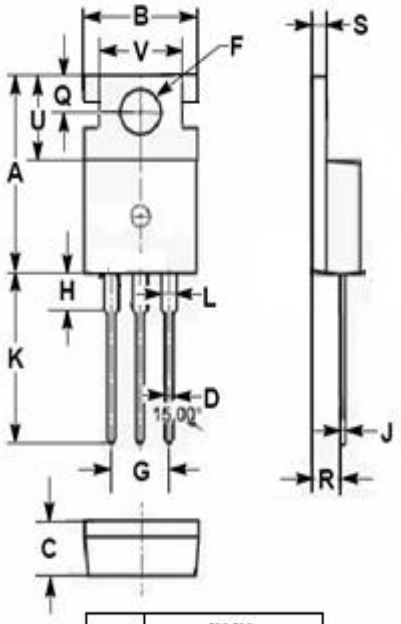
DESCRIPTION

- High DC Current Gain
  : h_{FE}= 1500(Min) @ I_C= 2A, V_{CE}= 2V
- Low Saturation Voltage-
  : $V_{CE(sat)}$= 1.5V(Max) @I_C= 2A
- Wide Area of Safe Operation
- High Reliability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- Electronic ignitor
- Relay& solenoid drivers
- Switching regulators
- Motor controls



DIM	mm MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	250	V
V_{CEO}	Collector-Emitter Voltage	200	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	180	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	4	A
I_B	Base Current-Continuous	0.3	A
P_C	Collector Power Dissipation @ T_C=25℃	25	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	5.0	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 30mA ; I_B= 0	180			V
$V_{(BR)CEO}$	Collector-Emitter Breadkown Voltage	I_C= 10mA; I_B= 0	200			V
$V_{(BR)CBO}$	Collector-Base Breadkown Voltage	I_C= 0.1mA; I_E= 0	250			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 2A; I_B= 2mA			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 2A; I_B= 2mA			2.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 250V; I_E= 0			0.1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 10V; I_C=0			10	mA
h_{FE}	DC Current Gain	I_C= 2A ; V_{CE}= 2V	1500	3000		
Switching times						
t_{on}	Turn-on Time	I_C= 2A , I_{B1}= I_{B2}= 5mA R_L= 10Ω ; P_W= 20μs; Duty Cycle≤ 2%			1.7	μs
t_{stg}	Storage Time				15	μs
t_f	Fall Time				18	μs

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