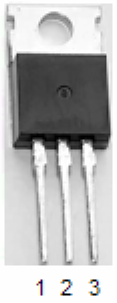
isc Silicon NPN Darlington Power Transistor BU810

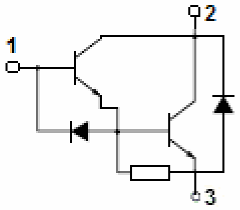
DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 400V(Min)
- High Switching Speed

APPLICATIONS

- Designed for use in high frequency and efficency converters, switching regulators and motor control.

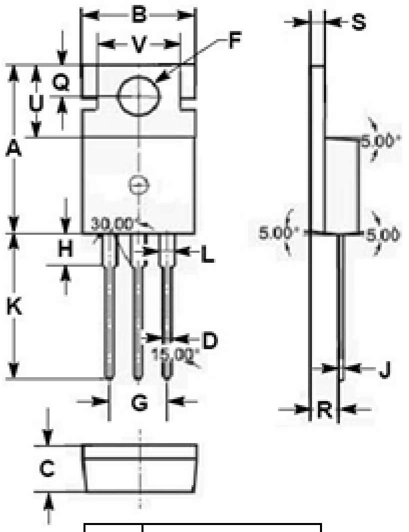




PIN 1. BASE
2.COLLECTOR
3. EMITTER
TO-220C package

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	600	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	7	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current	2	A
P_C	Collector Power Dissipation @ T_C=25℃	75	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃



DIM	mm MIN	mm MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	1.66	℃/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= 100mA ;I_B= 0	400			V
$V_{CE(sat)\text{-}1}$	Collector-Emitter Saturation Voltage	I_C= 2A; I_B= 20mA			2	V
$V_{CE(sat)\text{-}2}$	Collector-Emitter Saturation Voltage	I_C= 4A; I_B= 0.2A			2.5	V
$V_{CE(sat)\text{-}3}$	Collector-Emitter Saturation Voltage	I_C= 7A; I_B= 0.7A			3	V
$V_{BE(sat)\text{-}1}$	Base-Emitter Saturation Voltage	I_C= 2A; I_B= 20mA			2.2	V
$V_{BE(sat)\text{-}2}$	Base-Emitter Saturation Voltage	I_C= 4A; I_B= 0.2A			3	V
I_{CES}	Collector Cutoff Current	V_{CE}= 600V; V_{BE}= 0			0.2	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 400V; I_B= 0			1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			150	mA
V_{ECF}	C-E Diode Forward Voltage	I_F= 7A			3	V

Switching Times, Resistive Load

t_{on}	Turn-On Time	I_C= 2A; I_{B1}= 20mA;$V_{BE(off)}$= -5V V_{Clamp}= 250V			0.6	μs
t_s	Storage Time				1.5	μs
t_f	Fall Time				0.5	μs