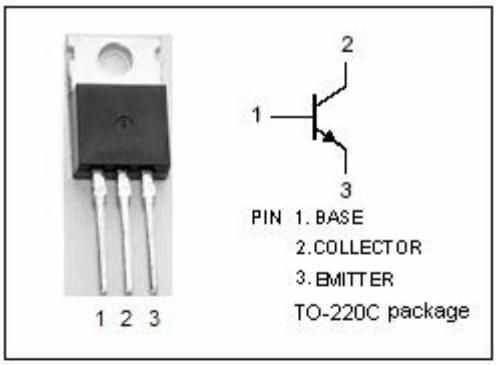
isc Silicon NPN Power Transistor — BUL1203E

DESCRIPTION

- High Voltage
- High Speed Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

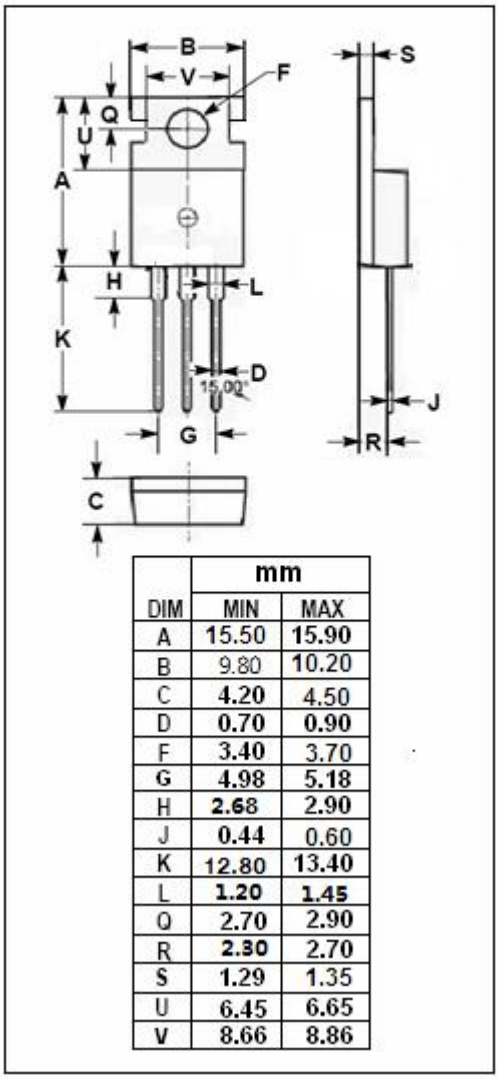
- Electronic ballasts for fluorescent lighting

ABSOLUTE MAXIMUM RATINGS (T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1200	V
V_{CES}	Collector-Emitter Voltage V_{BE}= 0	1200	V
V_{CEO}	Collector-Emitter Voltage	550	V
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Collector Current-Peak	8	A
I_B	Base Current	2	A
I_{BM}	Base Current-Peak	4	A
P_C	Collector Power Dissipation @T_C=25℃	100	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.25	℃/W



DIM	mm MIN	mm 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

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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= 50mA; I_B= 0	550			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 1A; I_B= 0.2A			0.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 2A; I_B= 0.4A			0.7	V
$V_{CE(sat)-3}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 1A			1.5	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 2A; I_B= 0.4A			1.5	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 3A; I_B= 1A			1.5	V
I_{CES}	Collector Cutoff Current	V_{CE}= 1200V; V_{BE}= 0			0.1	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 550V; I_B= 0			0.1	mA
h_{FE-1}	DC Current Gain	I_C= 1mA; V_{CE}= 5V	10			
h_{FE-2}	DC Current Gain	I_C= 10mA; V_{CE}= 5V	10			
h_{FE-3}	DC Current Gain	I_C= 0.8A; V_{CE}= 3V	14		32	
h_{FE-4}	DC Current Gain	I_C= 2A; V_{CE}= 5V	9		28	
Switching Times ;Resistive Load						
t_{on}	Turn-on Time	I_C= 2A; I_{B1}= 0.4A; I_{B2}= -0.8A; t_p= 30 μ s; V_{CC}= 150V			0.5	μ s
t_s	Storage Time				3.0	μ s
t_f	Fall Time				0.3	μ s

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