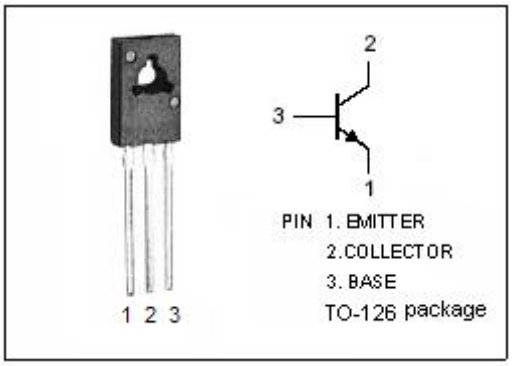
isc Silicon NPN Power Transistor — KSD1691

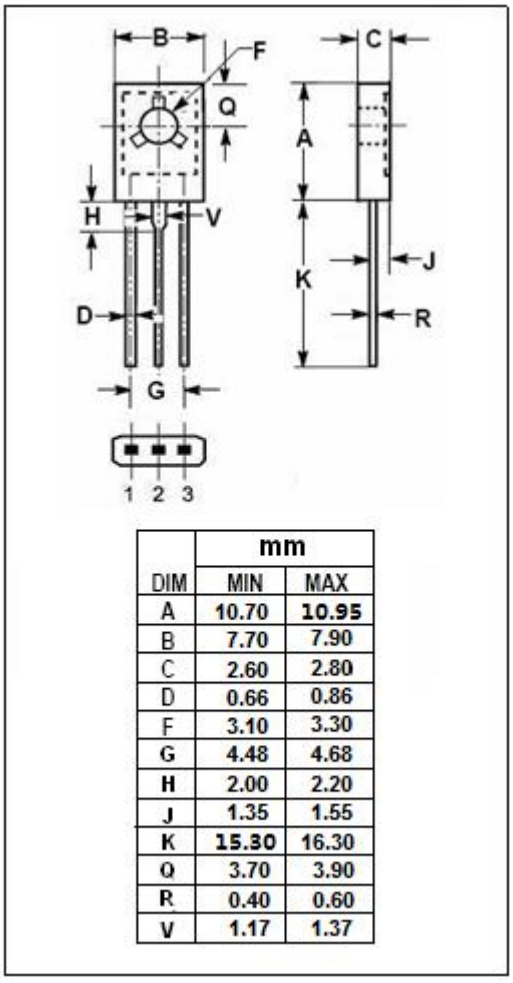
DESCRIPTION

- High Collector Current -I_C= 5A
- Low Collector Saturation Voltage
  : $V_{CE(sat)}$= 0.3V(Max.)@ I_C= 2A
- Complement to Type KSB1151
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- Designed for use in DC-DC converter, or driver of solenoid or motor.



DIM	mm MIN	MAX
A	10.70	10.95
B	7.70	7.90
C	2.60	2.80
D	0.66	0.86
F	3.10	3.30
G	4.48	4.68
H	2.00	2.20
J	1.35	1.55
K	15.30	16.30
Q	3.70	3.90
R	0.40	0.60
V	1.17	1.37

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	5	A
I_{CP}	Collector Current-Pulse	8	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @ T_C=25℃	20	W
	Collector Power Dissipation @ T_a=25℃	1.3	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 2A; I_B= 0.2A			0.3	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 2A; I_B= 0.2A			1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 50V; I_E= 0			10	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V; I_C= 0			10	μA
h_{FE-1}	DC Current Gain	I_C= 0.1A; V_{CE}= 1V	60			
h_{FE-2}	DC Current Gain	I_C= 2A; V_{CE}= 1V	100		400	
h_{FE-3}	DC Current Gain	I_C= 5A; V_{CE}= 1V	50			
Switching Times						
t_{on}	Turn-on Time	I_C= 2A, I_{B1}= -I_{B2}= 0.2A; R_L= 5Ω ; V_{CC}= 10V			1.0	μs
t_{stg}	Storage Time				2.5	μs
t_f	Fall Time				1.0	μs

◆ **h_{FE-2} Classifications**

O	Y	G
100-200	160-320	200-400

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