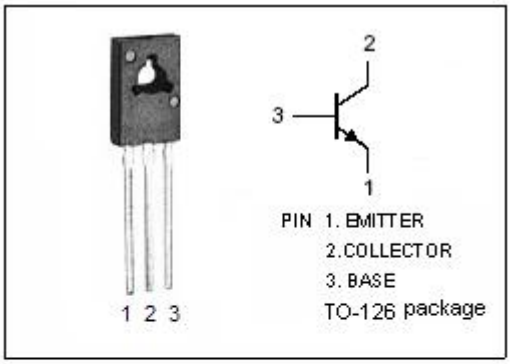
isc Silicon NPN Power Transistor 2SC3902

DESCRIPTION

- High Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 160V(Min)
- Large Current Capacity
- Complement to Type 2SA1507
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

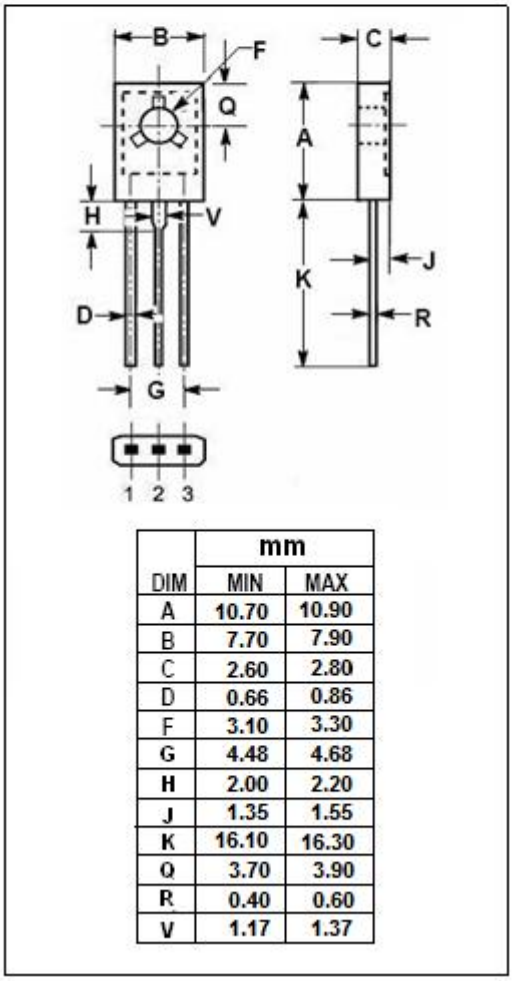


APPLICATIONS

- Color TV audio output, converters, inverters.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	1.5	A
I_{CM}	Collector Current-Peak	2.5	A
P_C	Collector Power Dissipation @ T_C=25℃	10	W
	Collector Power Dissipation @ T_a=25℃	1.5	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	10.70	10.90
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	16.10	16.30
Q	3.70	3.90
R	0.40	0.60
V	1.17	1.37

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 10μA; I_E= 0	180			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 1mA; R_{BE}= ∞	160			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Vltage	I_E= 10μA; I_C= 0	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 500mA; I_B= 50mA			0.45	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 500mA; I_B= 50mA			1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 120V; I_E= 0			0.1	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 4V; I_C= 0			0.1	μA
h_{FE}	DC Current Gain	I_C= 10mA; V_{CE}= 5V	100		400	
f_T	Current-Gain—Bandwidth Product	I_C= 50mA; V_{CE}= 10V		120		MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V, f_{test}= 1MHz		14		pF
Switching Times						
t_{on}	Turn-on Time	I_C= 0.7A, I_{B1}= -I_{B2}= 70mA R_L= 14.3Ω; V_{CC}= 100V		0.04		μs
t_{stg}	Storage Time			1.2		μs
t_f	Fall Time			0.08		μs

◆ h_{FE} Classifications

R	S	T
100-200	140-280	200-400

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