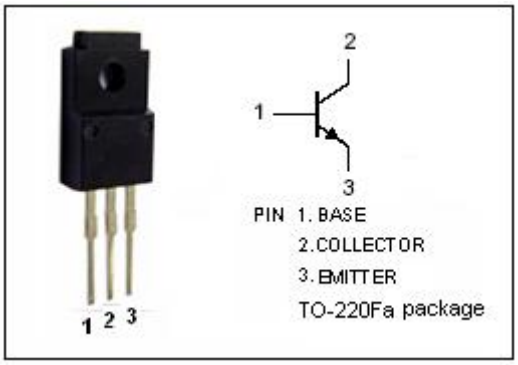
isc Silicon NPN Power Transistor — 2SC3942



DESCRIPTION

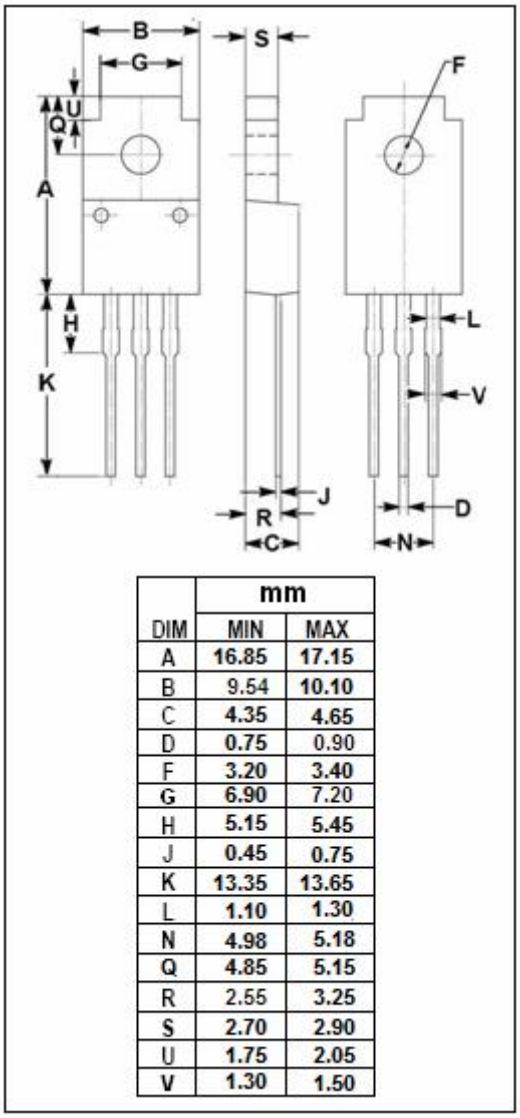
- High Collector-Emitter Breakdown Voltage
  : $V_{(BR)CEO}$= 300V(Min)
- Good Linearity of h_{FE}
- Low Saturation Voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for color TV chroma output applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	300	V
V_{CEO}	Collector-Emitter Voltage	300	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	0.1	A
I_{CM}	Collector Current-Peak	0.2	A
P_C	Collector Power Dissipation @ T_C=25℃	10	W
	Collector Power Dissipation @ T_a=25℃	2	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm MAX
A	16.85	17.15
B	9.54	10.10
C	4.35	4.65
D	0.75	0.90
F	3.20	3.40
G	6.90	7.20
H	5.15	5.45
J	0.45	0.75
K	13.35	13.65
L	1.10	1.30
N	4.98	5.18
Q	4.85	5.15
R	2.55	3.25
S	2.70	2.90
U	1.75	2.05
V	1.30	1.50

isc Silicon NPN Power Transistor 2SC3942

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 10 μA; I_E= 0	300			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 1mA; I_B= 0	300			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Vltage	I_E= 10 μA ; I_C= 0	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 30mA; I_B= 3mA			1.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 30mA ; V_{CE}= 10V			1.2	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 200V; I_B= 0			10	μA
h_{FE}	DC Current Gain	I_C= 5mA; V_{CE}= 50V	50		250	
f_T	Current-Gain—Bandwidth Product	I_C= 20mA; V_{CE}= 30V	70			MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 30V, f_{test}= 1MHz		2.7		pF