

isc Silicon NPN Power Transistor

2SC3942

DESCRIPTION

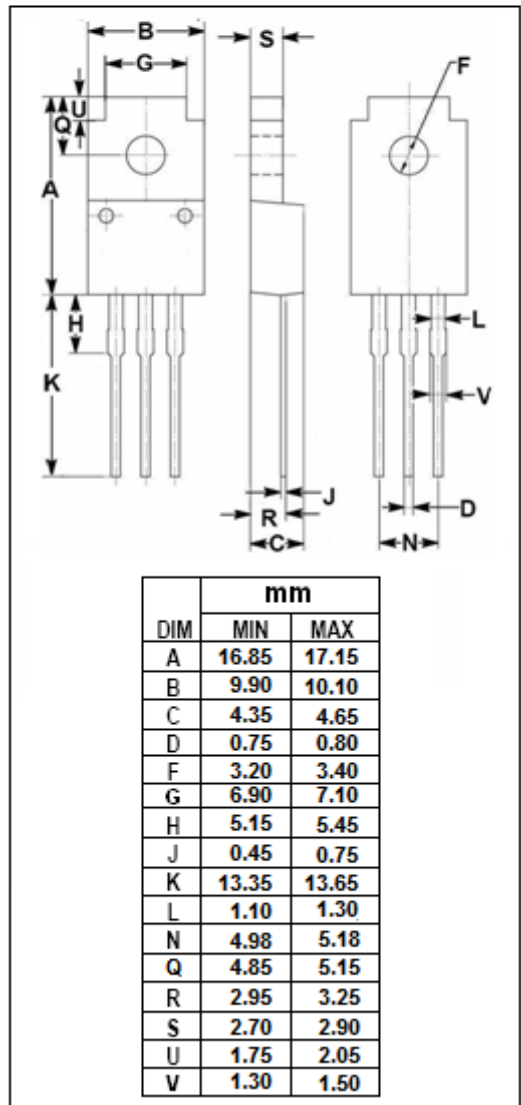
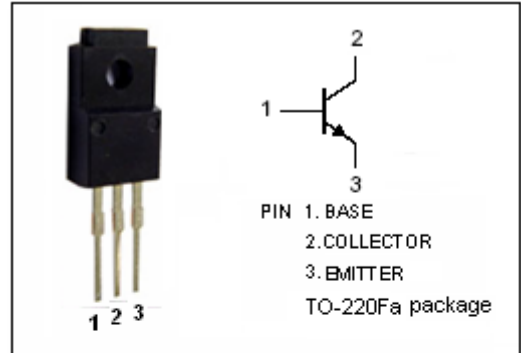
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 300V(\text{Min})$
- Good Linearity of h_{FE}
- Low Saturation Voltage

APPLICATIONS

- Designed for color TV chroma output applications.

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

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 @ $T_C=25^\circ\text{C}$	10	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	2	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor**2SC3942****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

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