

INCHANGE Semiconductor

isc Product Specification

isc Silicon NPN Power Transistor

2SC2242

DESCRIPTION

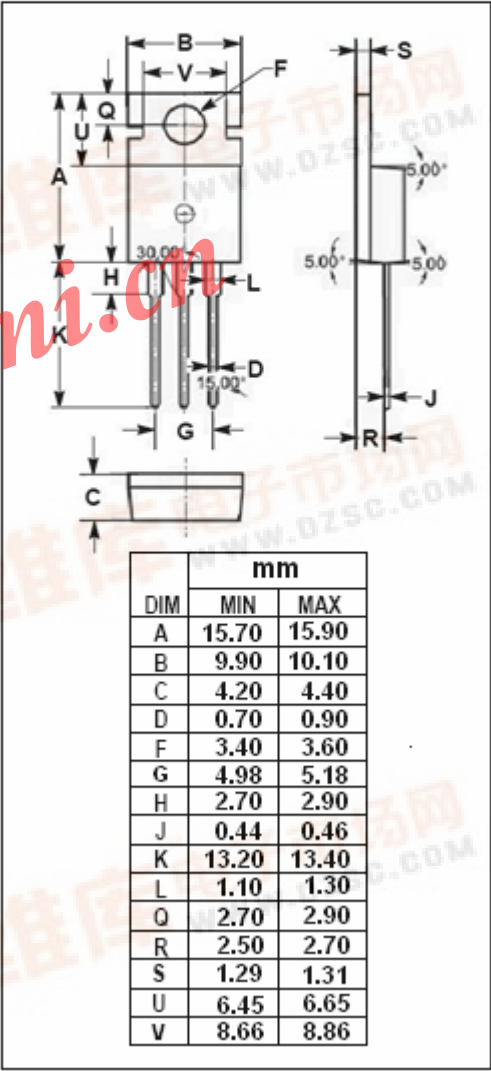
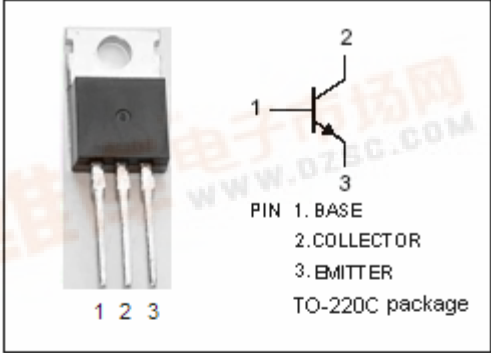
- High Breakdown Voltage-
: $V_{(BR)CBO}$ = 300V(Min)
- High Current-Gain—Bandwidth Product-
: f_T = 20MHz(Min)@ I_C = 20mA

APPLICATIONS

- Power amplifier applications
- Color TV sound output applications
- Recommended for sound output stage in line operated TV

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	5	V
I_C	Collector Current-Continuous	150	mA
I_B	Base Current-Continuous	50	mA
P_C	Collector Power Dissipation @ $T_a=25^{\circ}\text{C}$	1.5	W
	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$	25	
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$



ISC Silicon NPN Power Transistor**2SC2242****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=5\text{mA}; I_B=0$	300			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=100\text{mA}; I_B=10\text{mA}$			3.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=50\text{mA}; V_{CE}=10\text{V}$			0.9	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=240\text{V}; I_E=0$			1.0	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			1.0	μA
h_{FE}	DC Current Gain	$I_C=50\text{mA}; V_{CE}=10\text{V}$	40		170	
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=50\text{V}; f_{res}=1\text{MHz}$		5.5	12	pF
f_T	Current-Gain—Bandwidth Product	$I_C=20\text{mA}; V_{CE}=50\text{V}$	20	50		MHz